

BOSTON PUBLIC LIBRARY



3 9999 06543 487 8

GOVDOC

BRA

5178

E

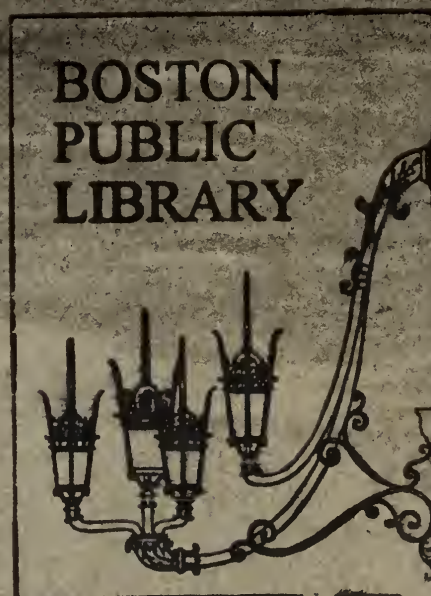
Summary

includes
separate summary
in pocket

~~BOSTON~~ ~~REDEVELOPMENT~~ ~~LIBRARY~~
~~Property of~~
~~Library~~

The 1976 Regional Open Space Plan

D43
M7



The Open Space and Recreation Program for Metropolitan Boston

D43

147

95V 94-431

Property of
BOSTON REDEVELOPMENT AUTHORITY
Library

The 1976 Regional Open Space Plan

Volume 1

Open Space and Recreation Program for Metropolitan Boston



Prepared by:



Metropolitan Area Planning Council

The preparation of this report was financially aided by the 101 cities and towns of the Metropolitan Area Planning District and by federal grants from the following agencies:

The U.S. Department of Housing and Urban Development
The U.S. Department of Transportation
The Urban Mass Transportation Administration
The Federal Highway Administration

July 1976

On the Cover:

*Enjoying a pleasant day of bicycling through the River-
way in Brookline.* Kenichi Nakano

About MAPC

The Metropolitan Area Planning Council is Greater Boston's officially designated regional planning agency. Its membership consists of 101 cities and towns, 11 local, regional and state agencies and 21 gubernatorial appointees.



"It would seem axiomatic that any society growing within finite space and having concern for quality of life must come to terms with the natural environment and plan the orderly advance of its occupancy."

R.M. Highsmith

J.G. Jensen

R.D. Rudd

Conservation in the United States

Table of Contents

	page number		page number
Foreword	7	Appendix G	
Introduction	9	Percentage of Agricultural Acreage by Municipality	115
Study Background		Appendix H	
The Region Today	11	The Massachusetts Bay Circuit	117
Past and Present Planning	12	Appendix I	
Present Challenge	15	Open Space Acquisitions 1969 - 1974	
Need for Open Space and Recreation	17	Department of Natural Resources	118
How the Study was Conducted	20	Appendix J	
Plan Objectives	22	Open Space Acquisitions 1969 - 1974	
Regional Policy	23	Metropolitan District Commission	119
The Coast		Appendix K	
Background	27	General Determination of Project Significance and Inclusion in Report	120
Policies for Coastal Resources	28	Appendix L	
Program	29	Boston Urban Wilds	120
Boston Harbor	29	Bibliography	121
North Shore	36	Photograph Credits	122
South Shore	45	Technical Advisory Committee	124
Fresh Water Resources		Executive Committee	124
Background	51	Credits/Acknowledgements	124
Policies	52		
Program	53		
The Rivers	53		
The Ponds	64		
Inland Wetlands	67		
Reservations			
Background	71		
Policies	72		
Program	73		
Urban Areas			
Background	96		
Policies for Urban Open Space and Recreation	99		
Program	99		
Historic Areas			
Background	101		
Policies	102		
Implementation			
Criteria	103		
Proposed Implementation Techniques	104		
Existing Implementation Techniques	105		
Appendix			
Appendix A			
Major Federal, State and MDC Open Space Holdings in the MAPC Area	109		
Appendix B			
Major Private Holdings	110		
Appendix C			
Population in the MAPC Region	112		
Appendix D			
Great Ponds in the MAPC Region	113		
Appendix E			
Percentage of Open Space by Municipality	113		
Appendix F			
Percentage of Wetland Acreage by Municipality	114		



Foreword

A Call to Action

Despite rapid growth and development in the Boston Region over the past few decades, the legacy and basic structure of the Metropolitan Park System—as envisaged by Frederick Law Olmsted, Charles Eliot I, Sylvester Baxter, Helen Storrow, Charles Bird, Philip Chase, Charles Sargent and many other men and women—remains substantially as it was a half century ago.

That the basic system has withstood the immense pressures of urbanization is compelling testimony to the validity of the vision of the planners of the early twentieth century. This legacy should also stand as a challenge to contemporary planners and conservationists alike to identify remaining natural areas which should be added to enhance and expand the basic regional open space network.

As the comprehensive planning agency for the 101 communities of the Boston region, the Metropolitan Area Planning Council considers this process to be one of its principal mandates, and to that end, the *Open Space and Recreation Plan and Program for Metropolitan Boston, Volume 1* is directed.

“... AND, A WORD OF CAUTION...”

In resource planning of the type found in this report, there is an implicit “Hobson’s Choice.”

In the judgment of the Council, it is essential that the process of identifying the remaining natural areas needed to expand and enhance the metropolitan open space and recreation system be followed by 1. *recommended means of assuring acquisition or control*; and 2. *recommendations for appropriate acquisition or control organizations or agencies*, be they private, quasi-public or public. In our judgment, to do less would be to prepare a *plan* without a *program* and in doing so, seriously miss meeting our mandate.

This judgment was reached only after a lengthy dialogue within the Council on the implications of such a policy.

As we have noted, many of the *major* open spaces and historic sites of Massachusetts have been preserved through the dedication and inspired leadership of individuals and groups of

private citizens. Middlesex Fells, Lynn Woods, the Bay Circuit, Boxford State Forest, Halibut Point, Misery Islands, the Arnold Arboretum, Crane’s Beach, Crowningshield Island are just some of these critical open areas which have been preserved through essentially private initiative.

Further, individuals have drafted and secured passage of legislation which directly resulted in the acquisition and management of area forest, parks, beaches and historic sites.

Thus, the role of private organizations has been integral to the protection and enhancement of the region’s natural resources in the past, and it is a role which must be recognized and assured in any future resource planning. Most importantly, the role played by private individuals and trusts in negotiating for gifts and bequests of land is most sensitive to the actions or stated intentions of public agencies.

The Council is, therefore, faced with a difficult and delicate challenge in meeting the mandates of a regional open space and recreation plan. On the one hand, the Council must prepare a professionally responsible *Plan and Program*, which includes the identification of critical areas; and recommendations for responsible acquisition and management entities.

On the other hand, the Council, as a student of history in the region, recognizes that the legacy of open spaces which we now enjoy has been due, in no small measure, to the private sector.

We must, therefore, present our recommendations and findings in the most sensitive and responsible manner so as to minimize the obvious potential negative impacts on delicate on-going negotiations by private individuals and trusts.

It is to this difficult and delicate balance that this plan is directed.



INTRODUCTION

In April 1969, the *Open Space and Recreation Plan and Program for Metropolitan Boston, Volume 1* was published. The first a series of regional planning documents developed by the Metropolitan Area Planning Council under its long-range open space and recreation program, the report presented a detailed plan and program for open space conservation and recreation encompassing the 79 communities which then comprised the MAPC district.

This report is an update of Volume 1. Since its publication in 1969, 22 communities have joined the Council. This update expands the comprehensive planning document to include all 101 MAPC member cities and towns.

Except in cases specifically stated to the contrary, the Council continues to endorse the policies and programs of the 1969 *Open Space and Recreation Plan* (Volumes 1 through 4). In this manner, the Council reiterates its support for previous policies and programs, while providing our member communities with an updated Regional Open Space Plan.

The update is concerned with the availability and use of open space in the Metropolitan Area Planning Council district. The report does not attempt to provide a classically structured open space system with a greenbelt, matrix or wedge open space system. Rather, the report focuses on areas in the region that realistically can be used by the public for open space and recreation purposes now.

The report's format is designed around four major open space categories: coastal, fresh water, reservations and urban open space. Each category is equal in priority and each category is viewed as essential to the proper development of any future regional open space system. For the report as a whole and for each open space category, policy guidelines are recommended. Also, after the policy guidelines for each open space category, there is a discussion of recommended programs and projects.

Purpose

The report has a fourfold purpose:

1. The Council believes that open space should provide active and passive recreational opportunities for the region's residents. There-

fore, the report attempts to meet the active and passive recreation needs of the region as determined and defined in the report.

2. While open space can and should be used for recreational pursuits, it is one of the purposes of this report to define and locate environmentally sensitive areas and offer suggestions on how these areas can be protected from all forms of misuse.

3. As a method of assisting state and regional implementing agencies the report identifies most of the areas in the MAPC region that are most suitable for open space and recreation use. In this manner the plan will serve as an inventory of those areas the Council believes should be preserved for open space and recreation use.

4. The Council believes that open space should provide order and form to urban development. To promote this concept, the Council intends to indicate those areas that should remain undeveloped and, in this manner, provide direction and form to the future growth of the metropolitan area.

Definitions

What is Open Space?

For the purpose of this report, open space is defined as open undeveloped land that may or may not be in its natural state. The report is primarily concerned with the conservation, protection and use of these areas for human use and enjoyment. "Regional" open space for this plan does not include parks, playgrounds or schools that exclusively serve local recreation needs. It does include all public holdings that are regional in nature; also, the holdings of private organizations such as the Trustees of Reservations and the Audubon Society are included.

Recreational use is subdivided into two general categories, *active* recreation and *passive* recreation. *Active* recreation is defined as *those activities that are exertive and require a level of organization or supervision such as field sports, skiing and swimming*. *Passive* recreation is defined as *those activities that are contemplative and receptive in nature and do not require*

organization or supervision such as hiking, viewing, and picnicking.

Both forms of recreation are necessary to fulfill human needs, and both forms of recreation are valid uses of open space.

The term open space and recreation plan, which is used throughout the report, refers to the physical relationship of all open space areas in the region to each other. Specifically, it refers to the concept of physically linking public open space so that it is a more cohesive and accessible land use.

Other Publications in this Series

Volume 2 of the *Open Space and Recreation Plan for Metropolitan Boston*, published in 1967, provides a detailed study of Boston Harbor and was precursor to the *Boston Harbor Island Comprehensive Plan*, which the MAPC developed for the Massachusetts Department of Natural Resources in 1972.

Volume 3, also published in 1969, is a detailed study of three major rivers in the region which flow into Boston Harbor—the Mystic, Charles and Neponset.

Massachusetts Open Space Law is the subject of Volume 4 and Volume 4 Supplement published in 1969 and 1972, respectively.

STUDY BACKGROUND

The Region Today

At the end of 1974 there were approximately 68,000 acres in the region that could be classified as regionally significant open space available to the public. This represents an increase of 23,000 acres in the region since 1969. However, approximately 66 percent of the increase, or roughly 14,172 acres, is due to the addition of 22 new member communities to the MAPC since 1969.

In the original 79-member Council study area, regionally significant open space has increased by approximately 8,828 acres during the past five years. Of the new acquisitions, 4,350 acres have been acquired by local communities utilizing the Commonwealth's Self Help Program,¹ while 4,225 acres have been acquired for public use by the state and local communities utilizing federal assistance from the U.S. Bureau of Outdoor Recreation,² working through the Massachusetts Division of Conservation Services. The remaining 253 acres were acquired by the Metropolitan District Commission.

However, the region's 8,828 acre gain in protected open space areas pales considerably in view of what has been lost.

During the past six years the region's three million plus citizens have lost access to roughly 15,000 acres of land to urban and industrial growth previously recommended for open space use.

Within the region there continues to exist a great competition for land that has been identified as suitable and necessary to meet the public's need for open space and recreation.

1. Administered by the Division of Conservation Services in the State's Executive Office of Environmental Affairs, this program offers towns and cities with conservation commissions up to 50% reimbursement for the cost of land purchased or developed for conservation or passive outdoor recreation.
2. Administered by the U.S. Department of Interior's Bureau of Outdoor Recreation, the fund allocates money to communities and political subdivisions for planning, acquisition and development of public outdoor recreation areas.



Past and Present Planning

Over the past 100 years there have been numerous open space and recreation plans that have affected the Metropolitan Area Planning Council District. To fully understand their contribution and relationship to this plan, a summary of past and present open space and recreation plans is presented.

Local

Most of the cities and towns in the metropolitan region have prepared comprehensive plans for the future growth and development of their communities. While the degree of specificity, coverage, currency and local acceptability varies greatly from town to town, most of these plans have stated goals, objectives and policies for the acquisition, preservation and enhancement of open space and recreation land in the community.

During the development of this plan, the Council undertook a major research effort to include locally developed open space and recreation plans in the regional planning effort. This included a series of subregional meetings of groups of planning boards and conservation commissions, during which Council staff reviewed the status of regional plans and sought local input.

Thus, it has been a guiding policy of the Council to make maximum use of appropriate locally generated plans and programs as policy input to the *Open Space and Recreation Plan and Program for Metropolitan Boston*.

State and Regional Plans

Open space and recreation planning for Metropolitan Boston has a long and proud history. Beginning in 1876 under the direction of Frederick Law Olmsted, Boston developed a park plan and began to construct the nation's first citywide park system.

The Metropolitan Park Commission, in 1892, retained Mr. Charles Eliot, landscape architect, to design the first metropolitan park system in the United States.³ The fruits of his recommendations are seen in today's metropolitan parks which were acquired by the turn of the century. These include the Blue Hills, Middlesex Fells

and many of the present Metropolitan District Commission Beaches.

Between 1925 and 1929 the Governors Committee on Needs and Uses of Open Spaces, formed at the urging of the Trustees of Reservations and acting with their support, developed the first state plan for open spaces.⁴ The plan's major proposal for the Metropolitan Boston area was entitled the Bay Circuit.⁵ The proposal recommended a semi-circular greenbelt from Plum Island via the Ipswich, Concord, Sudbury, Cochituate and Upper Charles Rivers to Duxbury Beach midway between Boston and the cities of Lawrence, Lowell, Worcester, and Providence. Today, some areas contained in the proposal have been protected, some have not. The proposal was revived in 1956, but final acquisition has yet to be accomplished. By statute, the Commissioner of the Department of Environmental Management (DEM) has the responsibility of implementing the proposal.

In 1966, the Massachusetts Department of Natural Resources (as of July 1, 1975, the Massachusetts Department of Environmental Management [DEM]) published an outdoor recreation plan which was updated in 1970 and is presently being updated again.⁶ These plans have proven useful statewide guides, and some progress toward open space acquisition and development has resulted.

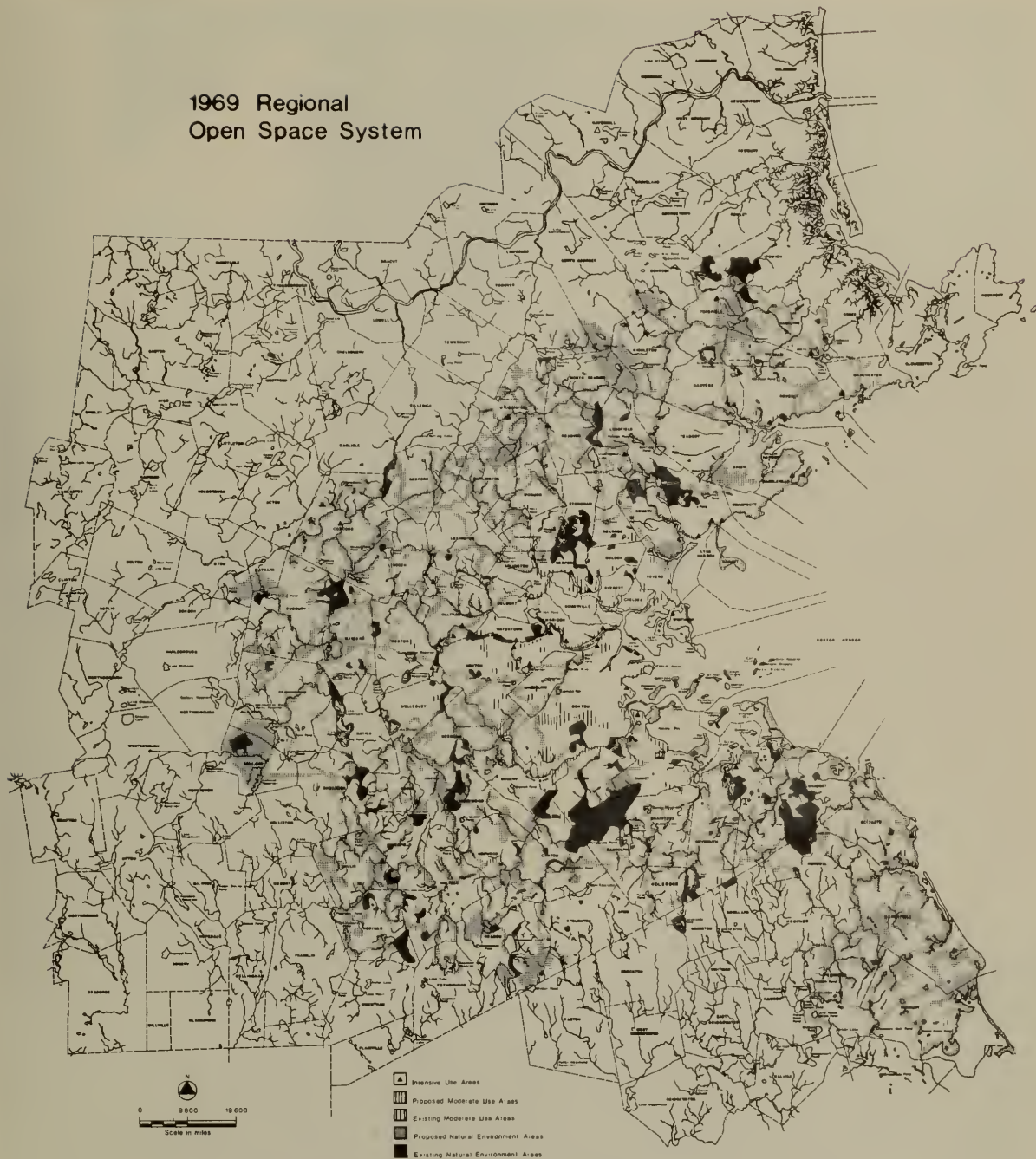
The first open space plan specifically designed for the Boston Metropolitan Area was the *Open Space and Recreation Plan and Program for Metropolitan Boston Volume 1* published in 1969 by MAPC. The plan proposed a regional open space system of 190,000 acres, or an addition of 145,000 acres to the then existing

3. The Metropolitan Park Commission was established in 1892 by the Commonwealth of Massachusetts to report on "... opportunities presented by the neighborhood of Boston for the creation of such open spaces as may best promote the health and happiness of the inhabitants of the metropolitan district."

4. The Trustees of Reservations is a private land trust formed in 1891 for the "preservation of beautiful and historic places."

5. See Appendix H for further details.

6. *Massachusetts Outdoor Recreation Plan 1970*, Massachusetts Department of Natural Resources.



45,000 acres of public open space. The plan encompassed 79 communities which comprised the Council membership at that time.

The plan proposed that: "intensive development be concentrated mainly in seven corridors

of development radiating from the core of metropolitan area, separated by six wedges of relatively undeveloped land. The ocean and Boston Harbor together are considered as the seventh wedge of open space. Some of the wedge



extends beyond the boundaries of the study area, as in the north, or terminate at the boundary of other developed areas, as in the southwest and south. At the inner boundaries of the wedges, large, well defined open space areas are proposed that will anchor each wedge against the pressures of metropolitan development. In addition, two greenbelts are proposed to separate urban development in the core of the region from further outlying suburban development.⁷

Policies and recommendations of the original Volume 1 have served as a guide for many open space related decisions during the past six years. Much of what has been accomplished in the areas of acquisition and preservation is directly related to the plan.

Present Challenge

Since World War II in Metropolitan Boston and elsewhere, open space for active and passive recreation, conservation and related purposes has been considered a land use of secondary importance, a luxury that need not be considered until other forms of land use are established. In many instances, communities have encouraged development of open land as a means of reducing the local property tax rate.

However, information is now being assembled that indicates that the development of open land does not necessarily result in lower property tax rates. For example, a recent study completed by the Town of Wayland indicated that if the town purchased 1,250 acres of open land for conservation purposes, it would add \$4.25 to the tax rate as opposed to \$7.75 if the land were developed for single family homes.⁸

Unplanned development has helped to create urban sprawl which a recently published federal report indicates is very expensive to communities in terms of economic costs, environmental costs, natural resource consumption and personal costs.⁹

Thus, expansion into areas without proper planning and consideration of the value of open space has helped to create blighted landscapes, urban sprawl, destruction of unique natural features and insufficient recreation opportunities.

New housing and business construction is necessary. However, open space must also be considered a major element in urban design with a significant impact on the shape and form of development.

Few countries have been endowed with the abundance of resources and natural beauty found in the United States. Yet, by any standard of measurement, there are no major metropolitan areas in the nation with cohesive, creative and adequate open space systems, and this includes Metropolitan Boston.

The first draft of the National Outdoor Recreation Plan states that while there has been continuing growth in outdoor recreation . . . "there are many people who go without recreation opportunities."¹⁰

In many instances, those who "go without" live in the nation's metropolitan areas, as illustrated in the 1970 Massachusetts Outdoor Recreation Plan.¹¹ "The distribution of lands and people is inversely related . . . the open areas had a small share of the population and a large share of the region's total existing recreation areas and vice versa." While this finding may seem obvious to many, it emphasizes a fundamental problem with the use of existing open space in the MAPC region.

Population, its increase and distribution, has a great impact on open space and recreation needs and opportunities. The Nationwide Outdoor Recreation Plan's analysis of the 1960 and 1970 census data states that " . . . the core city is expanding into communities which now ring the inner core city; out migration of the most affluent to the suburbs is continuing; and additional expansion of suburbs into nearby rural fringe areas is occurring."

7. Dr. Kenneth Moon, *Cost/Revenue Analysis of Residential Development* (Wayland Conservation Commission, 1974).

8. *The Costs of Sprawl: Detailed Cost Analysis* (Washington: Real Estate Research Corporation for the Council on Economic Quality, the Department of Housing and Urban Development, the Office of Planning and Management, and the Environmental Protection Agency, 1974).

9. *National Outdoor Recreation Plan* (Washington: Department of Interior, Bureau of Outdoor Recreation, 1974), pp. 1-3, 1-8.

10. Massachusetts Department of Natural Resources, *op.cit.*, pp. 5-3, 5-10.

The above conclusions are corroborated by the findings contained in a study prepared for the Metropolitan District Commission.¹¹ This report similarly projects population decreases for the core area communities of Metropolitan Boston. Conversely, significant population increases are anticipated in the rural and suburban communities (see Table 1).

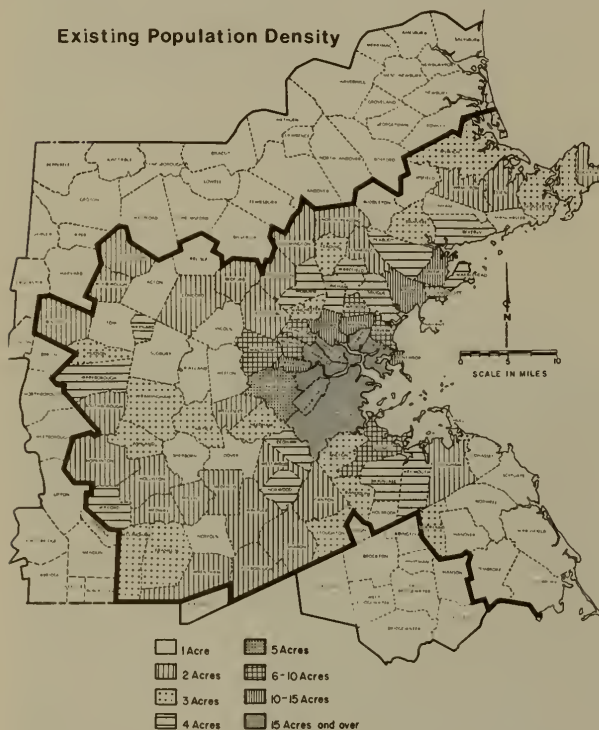
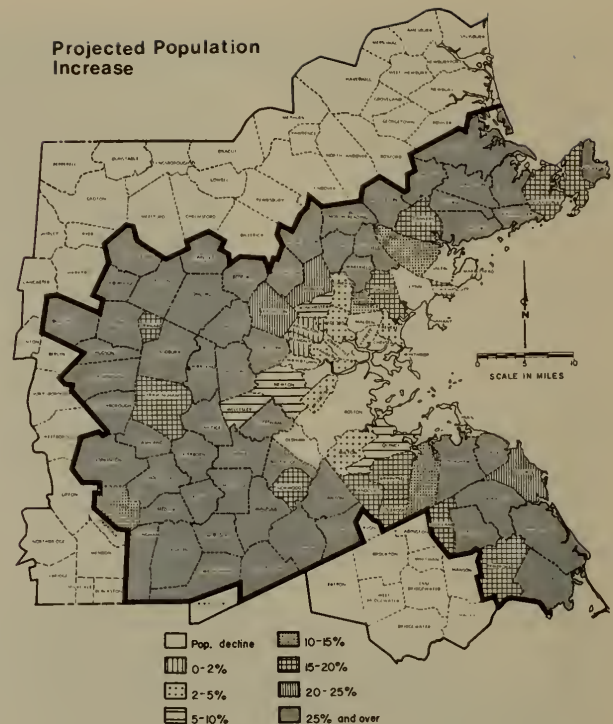
**Table 1: Population Projections
MAPC Region**

	1970	1990	Change	% Change
Core Communities*	1,252,308	1,123,900	-128,408	-10%
Suburban, Rural Communities**	1,720,502	2,544,360	+823,858	+48%
Regional Totals***	2,972,810	3,668,260	+695,450	+23%

* Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, Somerville, Watertown.

** All other communities in region.

*** For a specific list by community, see appendix C.



The MDC population projections indicate that the rural and suburban communities within the MAPC region will absorb the larger majority of new residents. As a result, these communities will experience additional pressure for increased public open space and recreation.

Considering the location of future populations, anticipated needs for open space acreage and location of existing open space (an inverted relationship of open space acreage to population density), the Council's open space and recreation planning has been guided by two principles:

- In the core communities where open space and recreation facilities are deficient by almost any standard of measurement, public agencies should concentrate on creating new opportunities and improving existing areas. In general, this can be accomplished with acquisition programs supplemented with innovative maintenance and rehabilitation programs. Thus, for the core cities, open space and recreation programs will be a response to present conditions and an attempt to improve them.

11. *The Eastern Massachusetts Metropolitan Area Water Quality Control Project: Draft Report on Planning* (Boston: Metcalf and Eddy, 1974).

- In the rural and suburban communities, the principle must be to *prevent* what has happened in the core communities. Open space and recreation areas must be developed along with other land uses instead of reacting to established land uses. Therefore, acquisition, conservation easement programs and zoning regulations should be emphasized in these communities and implemented in anticipation of population increases.

Need for Open Space and Recreation

It is difficult to quantify needs for open space and recreation. Various open space standards are available to determine need, but often they are very misleading and bear no relationship to open space problems to be solved. Some standards are concerned with areas for active play, others with wetlands or passive recreation. In an attempt to define present and future needs, this study compared various methods used to determine open space and recreation demand and related this data to existing conditions.

Open Space and Recreation Need Per 1,000 Population

Open space and recreation acreage per 1,000 population is one method of measuring open space and recreation need. After reviewing numerous standards used by planning agencies, universities and government agencies, the standard of 25 acres of regional parks per 1,000 population was selected.

Using this standard, the region should have 77,500 acres of regionally significant open space. Since the region presently has approximately 68,000 acres of regionally significant open space, the open space/recreation acreage deficit is 9,500 acres. This is an area roughly equivalent to one and one-half times the size of the Blue Hills Reservation.

While this method of measuring need has some value in indicating aspects of the overall problem, it cannot be used to interpret the need for specific open space/recreation activities or specific sections of the region. Also, by concentrating exclusively on acreage, the important question of quality of recreation is ignored.



Activity Days

Another method used to measure open space/recreation need is to quantify the demand for specific activity in terms of "activity days." The process requires a survey of all existing facilities to determine the number of users each can serve in an average day for a particular activity. Through the use of additional surveys and projections, the present and future *demand* for a particular activity at a particular site is derived. The difference between the existing activity day supply and demand for all facilities constitutes the statement of the area's adequacy in terms of active recreation opportunities.

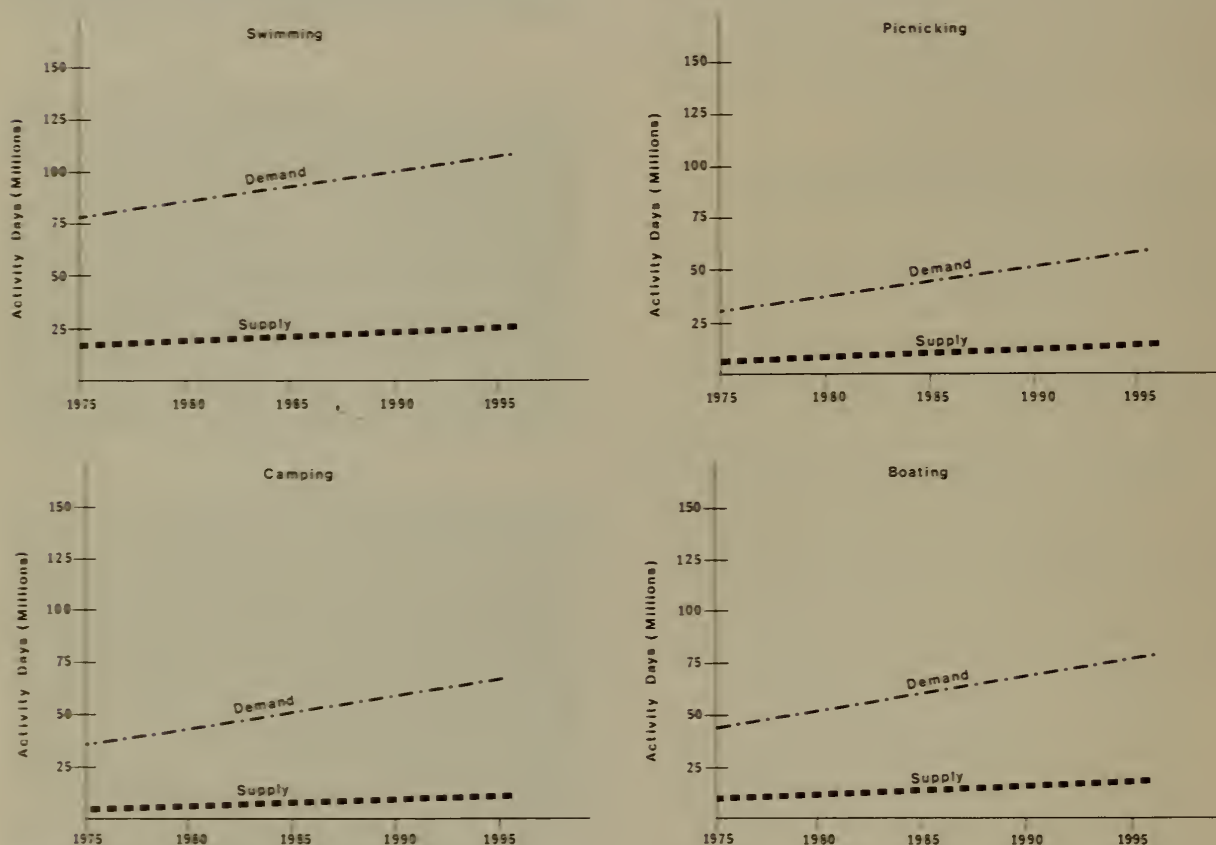
The 1970 Massachusetts Outdoor Recreation Plan used this method and divided the state into

various regions. Region IV closely corresponded to the MAPC area. Within each region, activity day supply and demand information was gathered for our major recreation activities: swimming, picnicking, camping and boating.

As indicated in Table 2, the state plan shows large unsatisfied demand for each of the recreation forms studied.

Similar to demand figures determined from a population/acreage ratio, demand figures derived from activity day studies also have a limited usefulness. In this instance, the study relates to a large section of the state and is designed to measure outdoor activities that need large tracts of land or specialized resources. Except for swimming, the study relates only to the more

**Table 2: Supply and Demand,
Four Major Open Space/Recreation
Activities**



Source:

Statewide Comprehensive Outdoor Recreation Plan 1971.
Massachusetts Department of Natural Resources

non-urban forms of recreation; and, as the nature of our region is urban, this can be considered a drawback. Thus, while this method illustrates some specific needs in the region, it cannot be applied to all recreation forms.



Surveys and Questionnaires

Surveys and questionnaires are also techniques used to measure open space and recreation need or preference. For example, in 1966 the MAPC conducted a telephone survey involving 5,000 interviews. The survey indicated that those activities requiring minimum skills and equipment are the most popular, specifically, swimming, outdoor sports, picnicking and bicycling.

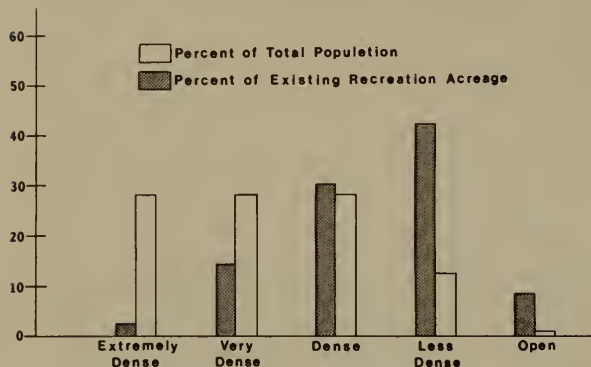
Other surveys, such as those recently completed by the New England River Basins Commission (NERBC) for its Southeastern New England Study, support the information gathered in the earlier MAPC survey. The NERBC survey also indicates areas of environmental concern throughout the region.

Surveys are useful in determining demand and preference. Their drawbacks, however, center on their degree of objectivity and the problem of relating areawide information to localities.

It is doubtful that any one method of measurement can answer all the questions related to the complex matter of open space and recreation demand. It is our intention to arrive at some understanding of the present conditions and future open space/recreation demands in the region by utilizing as many methods as possible. Therefore, open space and recreation demand will not be discussed in terms of needed acreage per specific activity. Rather, through the use of various demand studies and information concerning development trends, the plan has developed the following statements concerning present and future open space and recreation demand.

- The MAPC region is deficient in its total amount of regional open space, particularly in those areas that lend themselves to informal activities which require minimal skills.
- Existing regional open space is concentrated in areas of low population density; thus the shortage of open space/recreation opportunities is acute in the more urban and densely settled areas of the region.
- Most of the region's coastline is in private control, and many of the re-

Population and Existing Open Space



Source:
Statewide Comprehensive Outdoor Recreation Plan 1971.
Massachusetts Department of Natural Resources

gion's unsatisfied recreation demands relate to coastal and water resource areas. There is a need to protect existing public coastal areas and for expanded public control over the coastline whenever possible.

- Alternate modes of travel to the outlying open areas in the region must be developed. Presently, many areas that could absorb more use are not easily accessible to large portions of the population, particularly those without cars.
- Considering the amount of land that should be protected, there is a need to develop (not including new acquisition) mechanisms to protect open areas with high open space and recreation potential from development. One such regional mechanism is the adoption of flood-plain zoning amendments to all local zoning by-laws; another is the active promotion of conservation restrictions.

There are numerous reasons for existing and projected open space/recreation inadequacies, but two are predominant.

First, there has been a definite lack of adequate funding available to support the necessary level of open space acquisition,

rehabilitation and maintenance. In general, funding inadequacies are directly attributable to a lack of strong commitment to open space and environmental issues at various levels of government.

Ideally, governments act in accordance with priority. For too long, open space has been considered a low priority item. If we are to attain adequate levels of regional open space and recreation acreage, we must convince our public agencies and officials of the social, ecological and economic necessity of preserving open space in the developmental process.

Second, our problems arise because we have been unable to protect many natural areas from development, except by resorting to fee acquisition and conservation restrictions. Our laws regulating the use of wetlands, seashore, rivers and streams are not totally adequate to protect these areas from environmental degradation. Acquisition is not always the best answer, since frequently the total cost is beyond what the public can easily bear. Laws regulating the use of sensitive environmental areas and laws relating to conservation restrictions must be strengthened and adequately enforced. Again, this can be accomplished only if there is a stronger commitment to open space and the environment at all levels of government.

Existing open space must be protected, maintained and improved. New acreage must be added where further demands are anticipated. Open space must be considered a major element in urban design, one that has a significant impact on the shape and form of development.

How the Study was Conducted

The *Open Space and Recreation Plan for Metropolitan Boston* (Volumes 1 through 4) adopted by the MAPC was the starting point for the development of this plan. All of the previous proposals and assumptions were studied as they relate to what has been implemented as well as that which remains valid, given changes in the region during the past five years. In short, the effectiveness of the 1969 plan was analyzed and

utilized as input into the development of this plan.

Information was gathered and studied concerning those factors that relate to land use, such as:

- topography (landscape analysis)
- ecologically sensitive areas
- transportation improvements and plans
- population increases and distribution
- development trends
- zoning
- utility service areas
- general economic conditions

This information was used, along with demand studies and design criteria developed by the MAPC, to decide what areas should be considered for inclusion into the regional open space/recreation plan.

The design criteria, mentioned above, consists of four general concepts. These concepts significantly influenced what was included in the plan.

Concept 1 – Critical Areas

For the purpose of this plan, the term was generally defined as *Those areas that are least suitable for urbanization and/or development and, conversely, best utilized by the maintenance of their natural or existing character.* Because of potential conflicts between open space areas and recreation areas, the general definition was subdivided into “recreationally critical” and “ecologically critical” areas.

“Recreationally critical”, because of their size, accessibility, adaptability and location, are essential to accommodation of active and passive recreation demands of the region. Recreationally critical areas include the prominent and unique topographic features of the region, which are suitable for passive recreation purposes. In other instances, they include relatively nondescript open lands, which may be utilized for active recreation pursuits.

“Ecologically Critical” areas are sometimes synonymous with “recreationally critical” areas. For the most part, however, the term refers to those areas where uncontrolled or incompatible development could result in irretrievable damage to the environment. These areas may include coastal and inland



wetlands, rivers, streams, ponds, groundwater recharge areas, unique associations of vegetation, and significant wildlife habitats.

By identifying the above defined critical areas and including them in the regional open space and recreation plan it is hoped that those areas that are recreationally and ecologically vital to the region will be preserved.

Concept 2 – Linked Open Space System

Using the linked open space system concept, the plan attempts to physically and visually unite most of the region's major open space and recreation areas by acquisition or conservation restrictions. Linkage is most obviously valuable along major streams and rivers. One of the major benefits of linked open areas is increased accessibility to the region's open space and recreation areas. It will penetrate into many communities and neighborhoods.



thus linked open space provides the opportunity for alternative modes of travel to major parks and interest areas within the region. The pedestrian trail and the bicycle become more feasible modes of travel than would be the case if the region's recreation areas were scattered and not connected.

Concept 3—Local Open Space and Recreation Plans

This plan reflects decisions and priorities found in local open space plans of the MAPC member communities. Where potential open space/recreation projects overlapped local boundaries, regional policies and objectives were used to determine the final form of the proposal.

Concept 4—Private Open Space and Recreation Areas

Private open space and recreation areas are included in the proposed regional open space/recreation plan. This includes land held by the Trustees of Reservations, Audubon Society, Essex County Greenbelt Association, and other tax exempt charitable organizations.

Property of private organizations where public use is allowed is included as part of the regional plan with the stipulation that these areas should be restricted by easements or brought under public control if the reuse or sale of the property will result in a non-open space/recreation use. This action is not anticipated, but due to the great service the lands of

private organization provide the public, these lands should never be diverted for non-open space and recreation use.

The proposed regional open space and recreation system cannot easily be categorized in classical planning design terms (greenbelt, matrix, web, etc.) because it has been developed without any attempt to superimpose these criteria on the region. The plan gives shape and form to urban development and does:

1. Preserve the significant natural areas of the region.
2. Protect the environmentally sensitive areas.
3. Provide adequate open space acreage for passive and active recreation opportunities for projected population.
4. Disperse open space and recreation benefits more equally throughout the region.

The proposed regional open space/recreation plan consists of approximately 215,000 acres of which 68,000 are already in some form of public ownership. Except for those areas that are now used for public purposes, the remaining 147,000 acres should be brought under some form of public control or ownership during the next fifteen years.

The natural characteristics of the proposed acquisitions and regulated areas and suggested uses of the additional acreage vary. Some of the recommended sites must be developed to meet active recreation needs, while others should be developed for passive recreation pursuits.

Still others should be protected for wildlife management, water supply and strict conservation purposes. The difference in the intensity of use of the proposed acreage will be indicated in the narrative portions of the plan which discuss individual recommendations.

Plan Objectives

To aid in the formation of a regional open space/recreation plan that will provide the residents of the MAPC area the opportunity to derive the open space/recreation benefits inherent in their natural surroundings, the following objectives are presented:

- Alleviate the discrepancies between the distribution of the region's population



and the distribution of the region's open space recreation opportunities. In urban areas, where the potential for large open space acquisitions are minimal, this objective can be attained by maximizing existing opportunities and by using the city and its many attributes as new recreation facilities, i.e. develop walkways, bicycle paths and scenic viewing areas.

- Satisfy the active and passive recreation needs of present and future residents of the region.
- Help coordinate the open space decisions of local, regional, state and federal agencies responsible for implementation.
- Complement the diversity of landscape in the MAPC region.
- Include redevelopment proposals for landscapes defaced by the effects of careless development.
- Propose guidelines for the use of significant water bodies, watershed and natural drainage areas, the shoreline, wildlife resources, unique associations of vegetation, and other ecologically sensitive elements in the region.
- Provide mechanisms to preclude development in areas best suited for open space and recreation purposes.

- Focus on special needs and problems inherent in open space planning for densely settled urban areas.
- Enhance the value of the open space and recreation opportunities by incorporating historical areas into the plan.

REGIONAL POLICY

The general policy statements that follow form the basis for the recommendations and programs contained in this plan. They also can be used by local, regional, state and private agencies as a framework from which to make open space and recreation related decisions.

The policy statements that follow are divided into three categories: administration, quantity and quality.

Administration

- **Responsibility**

The implementation of a regional open space and recreation plan is the responsibility of existing federal, state, regional and local agencies such as the Executive Office of Environmental Affairs, Metropolitan District Commission and local conservation commissions.

- **Private Organizations**

Private non-profit charitable organizations and associations concerned with open space and recreation should be

encouraged to participate in all decisions regarding the implementation of the plan.

- **Clearinghouse**

The open space and recreation plans and policies of all local, regional, state and private charitable agencies should be coordinated so that priority projects can be more easily implemented. A first step in this direction is the necessity to streamline avenues of communication between state and local agencies and private charitable agencies so that information and proposals can be more easily exchanged. Organization and operation of the clearinghouse should be the responsibility of the Secretary of Environmental Affairs. The EOE A should act as a clearinghouse for the transmission of information and proposals, and for agreement on procedures and leadership in projects.

- **Education and Interpretation**

Public education and interpretation programs that expose people to the natural history of the region as well as recreational opportunities available to them should be encouraged. This policy also extends to encouraging public volunteer efforts to maintain and restore public open spaces.

- **Diversion of Public Land**

The Council supports all existing laws that prohibit the diversion of public open space for any use, unless it can be shown to be a public necessity. Also, the Council would support new legislation that would further prevent the diversion of public open spaces. Specifically, the Council supports legislation that would prohibit public agencies from constructing active recreation facilities on passive open space areas owned and operated by regional and state agencies.

- **Maximum Use**

Where there is a scarcity of public open space, more extensive use of existing public open space should be considered. This may involve night use (lighting) of

some facilities and more on site supervision.

- **Access**

Regional open space/recreation areas should be more accessible by various forms of mass transportation, i.e., rail rapid transit, suburban rail, regularly scheduled buses and chartered buses. Also, the use of the bicycle as an alternative mode of travel to recreation areas should be encouraged with proper planning and facilities.

- **Priority**

Areas intended to provide open space and recreation for regional use should be assigned top priority by all public and private agencies concerned with the protection and purchase of open space.

Quantity

- **Acquisition**

Fee simple acquisition and conservation restrictions should be the basic methods utilized to implement the proposals set forth in this report.

- **Linear Parks**

Linear parks should be encouraged as part of all proposed transportation improvements. In many instances, existing open spaces can be physically linked by designing linear parks into proposed transportation improvements. On a local level, the Town of Arlington is working to link many existing parks through the use of a linear park over the right of way for the proposed Red Line Extension.

- **Wetlands**

Those areas defined in state laws and regulations as inland wetlands and coastal wetlands should be publicly regulated through orders or zoning and where necessary, acquired either in fee or under a conservation restriction.

- **Maximization of Potential**

Areas such as power line rights of way, large commercial and public parking lots, watershed lands and water supply areas should be considered for recreation use.

- **Multiple Use and Water Supply**

The multiple use of all existing public open spaces related to water supply areas should be encouraged wherever possible.

In the short term, multiple use of water supply areas should be considered only for the land surrounding the water area. If, in the future, water supplies are fully treated and it can be shown that water quality will not be adversely impacted, water contact recreation should be considered. In all cases, where watershed or water resource areas are used for recreation purposes they should be supervised by local or state agencies.

- **Dense Urban Areas**

Because of the level of population density and the accompanying lack of open land, the special needs of densely settled urban areas should be emphasized. Rehabilitation of existing urban parks and playgrounds must be seen as important parts of the open space plan. In conjunction with this policy, special attention should also be given to those suburban areas under strong development pressure; so that the mismanagement of open space/recreation areas which has occurred in the urban areas will not be repeated in the suburbs.

- **Private, Charitable and Religious Holdings**

Existing private open space which can be classified as a recreationally or ecologically critical area should be included as part of local and regional open space plans. Owners of these properties should consider the use of conservation restrictions and/or planned unit development zoning in an attempt to maintain the general character of the area.

- **Gardening**

Activities such as gardening should be encouraged by all local and regional groups as a means of educating the citizenry about natural processes, and as a form of recreation that can be enjoyed by many people for minimal costs.

Quality

- **Planned Unit Development – Cluster Zoning**

All communities should amend their zoning bylaws to permit planned unit development (P.U.D.) as allowed under state zoning enabling legislation Chapter 808. This method of zoning will provide communities with the ability to preserve important open areas, and it will encourage new development that is harmonious with the natural surroundings.

- **Historic Areas**

Historic buildings and locations throughout the region should be protected and integrated with the regional open space plan. The establishment of historic districts as provided under General Laws Chapter 40C should be encouraged by all government agencies. Also, the efforts of the Massachusetts Historic Commission should be supported by all local historic groups.

- **Urban Design**

In an effort to enhance the urban physical environment, the MAPC supports urban design techniques such as sign laws, architectural review boards, off-street parking and restrictions on outdoor advertising.

- **Pollution Abatement**

In order to meet increasing recreation needs, a program to reduce pollution in inland and coastal waters must be developed. Additional protection measures are necessary along river banks, coastal marshes and harbor fronts.

- **Maintenance**

Strong and effective maintenance programs should be developed at the local, state and regional levels. The regional open space and recreation plan must have appropriate funding from state and local agencies to allow it to maintain standards of excellence and physical attractiveness.

THE COAST



The following chapter is concerned with the coastal resources of the MAPC region. It is divided into three sections:

1. An introductory narrative highlighting major issues confronting the region due to past and present use of the coastline.
2. Policy statements that provide guidelines for future use of coastal resources.
3. A program for the coast consisting of major open space and recreation proposals of state, regional and local agencies.

Background

In 1972 the United States Congress, recognizing the value of the nation's coastline, passed the Coastal Zone Management Act (CZM). Under the program, states first receive planning grants to develop a coastal management program. Once the program is approved, the states will receive grants to administer the program.

In Massachusetts a task force, under the aegis of the Executive Office of Environmental Affairs, was formed in January 1974 to provide overall direction to the coastal zone management effort. Eventually, this program will provide guidelines for coastal development and will make important recommendations concerning the location of coastal oriented facilities such as nuclear power plants, oil storage facilities, and off shore tanker terminals.

In Massachusetts, the Coastal Zone Management Program will have to consider all competing uses for the coastline. One of the purposes of this report is to serve as an advocate for open space and recreation use along the coast. Hopefully, the final product of the CZM program will accommodate all necessary land uses including consideration of coastal open space available for public use as a vital coastal land use.

The coastline is one of the greatest natural resources in the MAPC region. It has a wide variety of natural features including sandy beaches, rocky outcroppings, salt marshes, sand spits and natural harbors all of which provide numerous open space and recreation opportunities.

Aside from its natural amenities, the coastline has continually played a major role in



shaping the pattern of life and has great cultural significance for the MAPC region.

Considering the economic and recreational value of the coast, it is not surprising that throughout our history many homes and busi-

nesses were built as close to it as possible. In some instances, this has caused irretrievable environmental damage to the coastline.

Development along the coastline and in coastal related areas continues to occur at a rapid pace. With easy access to the central cities, more seaside vacation homes are being converted into permanent residences. Population densities are increasing near the coast with a resulting need for new roads, utilities and other town or city services. The new development, in many instances, has adversely impacted the coastal ecosystem, thus altering the natural beauty of the area.

Only about one-sixth of the MAPC region's approximately 600 miles of tidal shoreline is available for public use.¹² The problems this creates is illustrated by the fact that swimming and water related sports are the recreation activities most in demand but with the largest deficiencies in the region. The existing public coastal areas, which are now heavily used, face the possibility of overuse to a point of irrevocable environmental damage if they attempt to accommodate future demands.

The coastal areas must be regulated so that development is not allowed to alter its natural characteristics. Also, more of the coast must be made available for public use if present and future coast oriented recreation demands are to be met.

Policies for Coastal Resources

- **Use**

Except for areas that are essential for commercial and industrial activity and where residential development will not damage an environmentally sensitive area, the coastline should be used for open space, recreation, research and aesthetic purposes only. The coastal plans and programs of public agencies should be designed to maximize the recreational and scenic value of the coastline. Local site improvement pro-

grams should be encouraged and coordinated with statewide programs for coastal scenic improvement.

- **Access**

Access to and use of the coast must be recognized as the privilege of every citizen. It should be the policy of all public agencies concerned with open space and recreation to secure a free right of passage between mean high and low water for public use. Those areas that are ecologically sensitive, such as salt marshes, should be exempt from this policy. Also, through the use of direct state acquisition and the state self-help program, a cooperative state, local and private effort should be designed to acquire, for public use, as much of the coastline as possible.

- **Protection**

The protection of the coastline and naturally associated areas. The coastline is a very fragile natural resource, yet, it has many uses—recreation, aesthetic relief, food production and wildlife habitat—essential to the regional economy and environment. Since coastal resources cannot be duplicated, the ecological balances of coastal areas must be fully understood, and laws must be redesigned to protect and preserve our coastal resources.

Implementation of a coastal zone management program would be a major step for the protection of the coastal area. In conjunction with a coastal zone management program, all existing laws relating to the natural resources of the coast should be strictly enforced.

- **Non-Car Access**

Public areas along the coast should be administered to encourage alternative modes of access. To implement this policy, alternative methods of travel to the coast, including bicycle trails and public transit via buses, should be encouraged by public agencies. Also, the number of parking spaces near public coastal facilities should be limited, so that impact of auto related facilities on

12. High tide line around all marshes was used in estimating the total miles of the region's shoreline.

coastal areas will be minimized. This policy, however, should not be construed to limit the designation of roads along the coast as scenic roads.

- **Waterfront Zoning**

To prevent misuse of developed portions of the coast, waterfront districts should be established as part of local zoning and subdivision ordinances.

Special provisions relative to permitted uses, set backs from water, architectural design and public access should be developed by all coastal communities. The coastal zone management program should provide standards and guidelines for waterfront district regulations.

- **Historic Areas**

Natural and manmade features along the coast, symbolizing the region's historic and cultural relationship to the area must be made available for public education and enjoyment. The protection of historic areas (through ownership, inclusion in historic districts, etc.) must be incorporated into the plans and programs of public agencies involved with public open space and recreation along the coast.

into three sections—Boston Harbor, North Shore and South Shore. *The general guideline for the program is to provide as much public shoreline as possible without putting impossible restrictions on vital competing uses.*

Boston Harbor

Boston Harbor is one of the most valuable resources in the MAPC region. Its islands and shores have been intimately connected with the development of Boston for more than 300 years. Because of its splendid harbor, Boston became a major port during the Colonial era and is rich in historical significance.

Because of numerous factors, there has been a rapid decay and deterioration of the harbor during the past 50 years. In addition, the recent closing of U.S. Naval facilities in Boston mark the first time in the post-revolutionary period that Boston has not been a U.S. Navy port. Today, the waters of the inner harbor are grossly polluted and burdened with debris. Many of its wharves have been demolished or burned out. Recreation facilities are inadequate and, in some portions, non-existent.

The revitalization of the harbor is a great challenge and a unique opportunity to meet the water oriented recreation needs of the MAPC area while conserving valuable marine resources and creating a desirable waterfront setting for surrounding residential, commercial and industrial uses.

Program

The following program illustrates the major projects recommended for the coast. It is divided

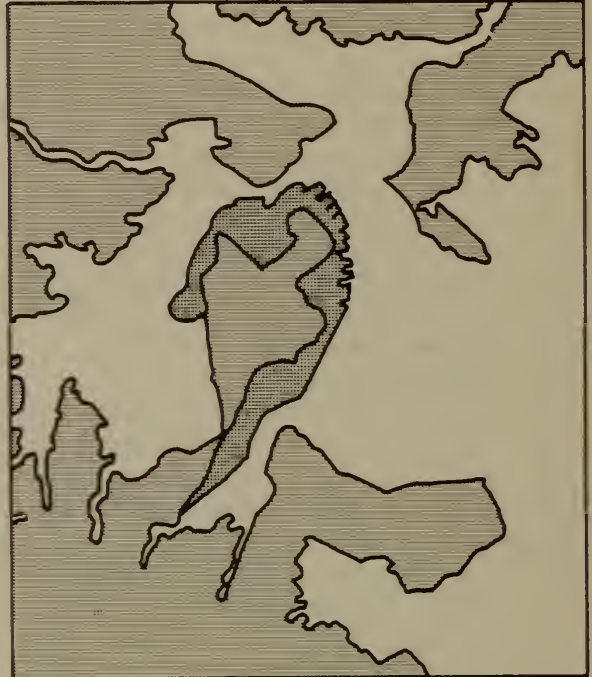


LAND CREATION IN BOSTON HARBOR 1800/1960

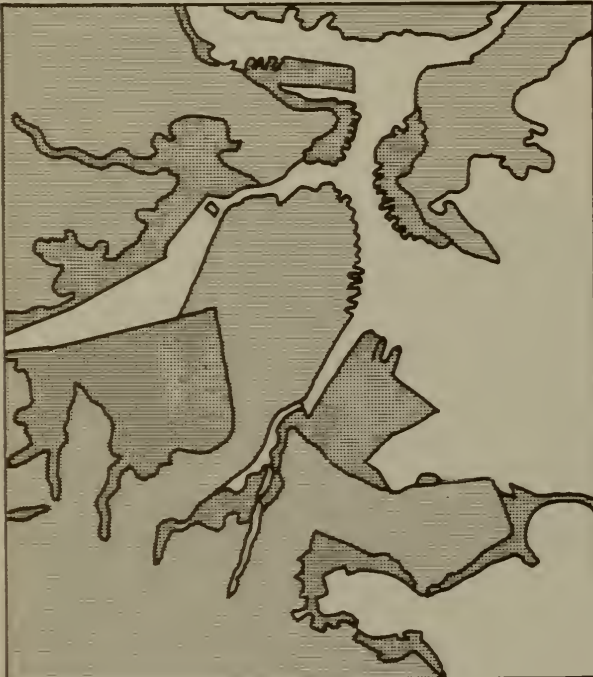
1800



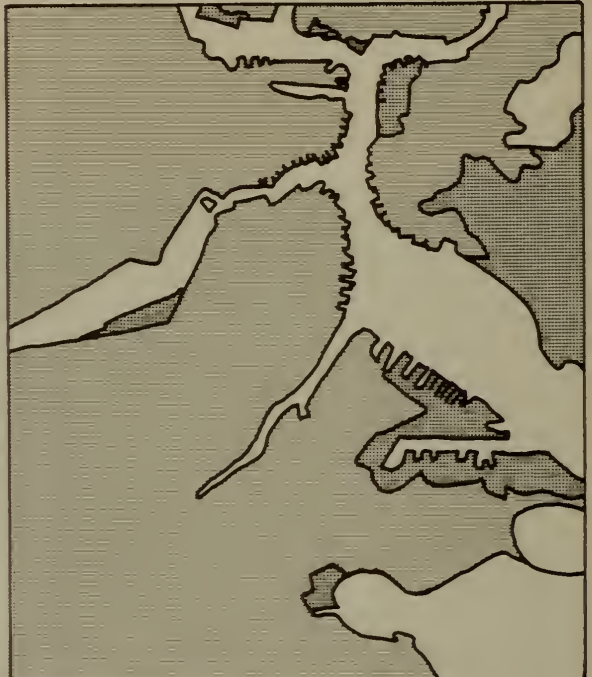
1800 - 1850

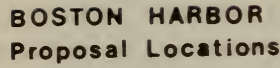


1850 - 1900



1900 - 1960





(1) *Charlestown Navy Yard—Charlestown*
Charlestown is a densely settled urban area with little open space for recreation use. The present Charlestown residents do not have access to the shoreline, although Charlestown's history is closely associated with the sea. With the recent closing of the Charlestown Navy Yard, however,

there exists an opportunity to rectify the problems mentioned above.

The Department of Defense will develop a 27-acre portion of the former navy yard for park and historic purposes. The MAPC endorses this action and urges the City of Boston to work with the federal authorities to make the park a reality.



The theme of the park will be the history of the former Navy yard and the career of the U.S.S. Constitution, "Old Ironsides". The U.S.S. Constitution, commissioned in 1797, was victorious in 41 naval battles. It has been visited by millions of Americans from across the nation and is an important national historic treasure.

The proposed park will emphasize naval history, but it will also provide areas for passive recreation including picnicking, strolling and viewing the harbor.

While the park will draw people from beyond the region and the state, it will also serve a local function. It will provide Charlestown with easily accessible open space, something it now lacks. Thus, the proposed park, while regional in importance, will help to alleviate the open space/recreation problems of Charlestown.

(2) Chelsea Naval Hospital—Chelsea

Like Charlestown, Chelsea is a densely populated urban area severely lacking in open space and recreation facilities. It also has historically been associated with the sea, but has no public access to its surrounding waters. The recent closing of the Chelsea Naval Hospital presents an opportunity to rectify the open space and recreation deficiencies existing in Chelsea.

In conjunction with the City of Chelsea, the MAPC recommends that the relatively flat southern and western portions of the site's shoreline be developed as a multi-use waterfront park (approximately 20 acres). The area of the proposed park now contains military housing (mostly wood frame) and recreation areas, two tennis courts, basketball courts, baseball diamonds, a football field, walking paths and

benches. By upgrading the existing recreation facilities and providing waterfront trail and picnic areas the proposed park could provide Chelsea residents with numerous active and passive recreation opportunities.

For the proposed park to function adequately, it must have sufficient access. The main entrance to the former Naval Hospital is located under the Mystic River Bridge. Because of probable development on other portions of the former Naval Hospital site, this road will not be adequate for the proposed park since all potential park users would have to pass through the new development to get to the park. This additional traffic (pedestrian or vehicular) could seriously endanger the development potential of the remaining 82 acres of the hospital site.

MAPC recommends that the auxiliary entrance (now closed) located off of the extreme southern portion of Broadway, be studied as a possible park entrance. It is suggested that a small parking lot could be developed at the junction of Broadway and the auxiliary entrance so that people who arrive by car will be able to park and walk, instead of driving into the recreation area. The link between the former naval hospital grounds and Broadway is vital, because without it the area of the proposed park would be almost inaccessible to the public.

(3) Downtown Waterfront—Boston

The area known as the downtown waterfront is probably the most historic area in Boston Harbor. From Long Wharf and Great Cove, Boston carried on trade and commerce with the world. Presently, the area is being redeveloped in an attempt to restore it to its former prominence. Most of the new development is residential and commercial in nature.

Open space/recreation facilities are also being developed along the downtown waterfront. The major project is a 4-acre park between Long and Lewis Wharves being constructed by the Boston Redevelopment Authority. A major theme for open space and recreation development for this area has been "the walk to the sea concept." It consists of a traffic free pedestrian park constructed between Government Center and Long Wharf, which would visually link downtown Boston with its waterfront. The new



park designed by the Boston Redevelopment Authority provides new impetus to this idea, and essentially carries it out, except for the formidable barrier of the elevated Central Artery. Nonetheless, the MAPC supports the development of a new waterfront park, which serves not only the downtown but the residents of the North End as well. The new park will be a catalyst for further redevelopment of the downtown waterfront and help restore an historical section of the city to a position of importance once again.

(4) Belle Isle Marsh—Revere, Winthrop, Boston

The Belle Isle Marsh should be preserved for conservation purposes. This salt water marsh, located in Revere, Winthrop and East Boston, has numerous valuable forms of marine life and is one of the last significant salt marshes on Boston Harbor. The MAPC recommends that two avenues of protection be explored for this area. First, the Metropolitan District Commission should examine the possibility of acquiring Belle Isle Marsh and maintaining it as a natural environment area. Second, if acquisition is not possible or only as a long term proposition, it is recommended that the Boston, Winthrop and Revere Conservation Commissions act to severely restrict all future development that might adversely effect the marsh.

The former site of the Suffolk Downs Drive-In theatre (27± acres) is an example of why restrictions should be stringent. Originally, this site was part of Belle Isle Marsh, but extensive filling has precluded any opportunity for this area to revert back to marsh land. Industrial



development of this site could have severe adverse affect on the ecological balance of the remaining marshland. Boston, therefore, should allow reuse of this site only if the proposed project can be shown to be ecologically safe.

(5) Constitution Beach—Boston

Constitution Beach, along the eastern shore of East Boston, is operated by the Metropolitan District Commission. This beach provides swimming facilities for one of the most open space deficient and densely populated districts in Boston. Its continued existence is of vital importance to the residents of the area. The MDC is presently upgrading and redesigning many of the support facilities at Constitution Beach, which will significantly improve the recreation value of this area.

Water quality is a continuing problem for this beach. Presently, it is acceptable for human recreation, although there have been periods in the recent past where it has failed to meet these standards. Much of the problem is due to the combined surface water and sewer system of East Boston which discharges directly into the bay during periods of overflow. Obviously, any new development that is linked to the present system will exacerbate the problem. It is recommended that Boston not allow any new development in East Boston to use the sewer system in question until such time as new capacity or treatment facilities can be provided.

The tenuous condition of the beach's water quality also demands that no new filling of the bay in which Constitution Beach is located be permitted. Any additional filling will reduce the

flushing action of the bay and possibly increase pollution to unsafe levels.

The MAPC, therefore, recommends continued maintenance of this area and a strong effort to improve water quality.

(6) *Dorchester Bay Reservation—Boston*

The 1969 MAPC Open Space and Recreation Plan and the Boston Conservation Commission have recommended the shoreline of Dorchester as a potential harbor front reservation.

Many of the areas included as part of this proposal are already under some form of public control; for example, the South Boston Beaches, Tenean and Malibu Beaches. The concept of linking the existing public areas by acquiring the private lands now separating them would provide the region's residents with a coastal park that has a wide variety of recreation opportunities.

The coastline from the South Boston Beaches to Columbia Point and Tenean and Malibu Beaches should be controlled by the public and designed as a unit, as the Dorchester Bay Reservation. Considering cost of coastal property, this proposal should be a long term project of the Metropolitan District Commission.

(7) *Wollaston Beach—Quincy*

Located in Quincy, this MDC facility is one of the more heavily used beaches on the South Shore. Its scenic value has been significantly reduced by the location of roads which are extremely close to the shoreline. Despite this, the area remains extremely popular.

Continued maintenance of Wollaston Beach is essential. Included in a maintenance program, the MAPC recommends a renewal of the beach cover, which recent observation has shown to be

heavily laden with debris and marine plant life. Also, all methods of visually enhancing the beach area should be explored by the MDC and implemented, if feasible. With a vigorous maintenance effort, Wollaston Beach will continue to serve Quincy and surrounding communities in a satisfactory manner.

(8) *Mainside Park—Hingham*

On May 12, 1972, 461 acres of shoreline and salt estuary, encompassing the entire shore of the Weymouth Back River, were deeded to the Town of Hingham by the federal government for recreational purposes. Directly across the Back River in Weymouth is a park with several hundred acres called Great Esker Park. Taken together, these parks create one of the foremost scenic and passive recreational areas on the South Shore. Also, their location, close to Boston, greatly enhances their value as regional facilities enjoyed by large numbers of people.

Hingham has developed a recreation plan for Mainside Park (the former Naval Ammunition Depot) and the MAPC believes that the proposed plan will effectively utilize the site's recreation potential. The MAPC commends and supports the actions of the local authorities and cites this area as a wise reuse of coastal property.

(9) *World's End—Hingham*

World's End is one of the most beautiful coastal parks in the entire region. Once threatened with development, it is now under the control of the Trustees of Reservations.

Frederick Law Olmsted, the landscape architect who designed Central Park and Boston's park system, once designed World's End for subdivision purposes. Fortunately, much of the



original project was never implemented and today the region's residents can enjoy this fine wooded area.

The area is a fine example of a coastal park and is maintained and managed by the Trustees of Reservations, a private trust.



(10) *Nantasket Beach—Hull*

Nantasket Beach in Hull is owned and operated by the Metropolitan District Commission. Similar to Revere Beach, Nantasket Beach is in the midst of a renewal program. In recent years, the beach and adjacent areas have been in a state of decline. As a result, Nantasket Beach, one of the largest and most attractive public beaches in the region, did not provide the recreation and aesthetic benefits it was capable of offering.

Nantasket Beach is one of the most important natural resources on the South Shore. The MAPC recommends that the open space/recreation value of the beach should be a primary consideration in any redevelopment plans endorsed by the Town of Hull. All planned commercial and residential uses adjacent to the beach should not compromise the character of the beach, or attract large crowds which may strain its capacity.

In past years, maintenance at Nantasket Beach has not always been adequate. Considering the size and popularity of the beach, the MAPC recommends an increased maintenance effort by the MDC to insure quality public recreation facilities.

Harbor Islands—Boston Harbor

The islands of Boston Harbor have long been recognized as a valuable natural resource with



vast recreational potential. Scattered across Boston Harbor, there are 30 islands totalling approximately 1,200 acres which lie within a 25-mile radius of a population in excess of 3 million people. *The Boston Harbor Islands Comprehensive Plan*, developed by the MAPC for the Department of Natural Resources in 1972, attempts to maximize the potential of the Harbor Islands as a recreational and conservation resource. If developed in a manner consistent with the plan, the islands, in conjunction with new open space development in core communities, would help to alleviate the great need for open space and recreation facilities in the core area communities of the MAPC region. Also, they would provide the residents of the region with an opportunity for a unique recreation experience.

The state has acquired 13 islands to complement those previously under public control; this places most of the islands in public ownership. The MAPC strongly recommends their development as a recreation facility in the near future. For detailed analysis of the Harbor Islands, please see *The Boston Harbor Islands Com-*

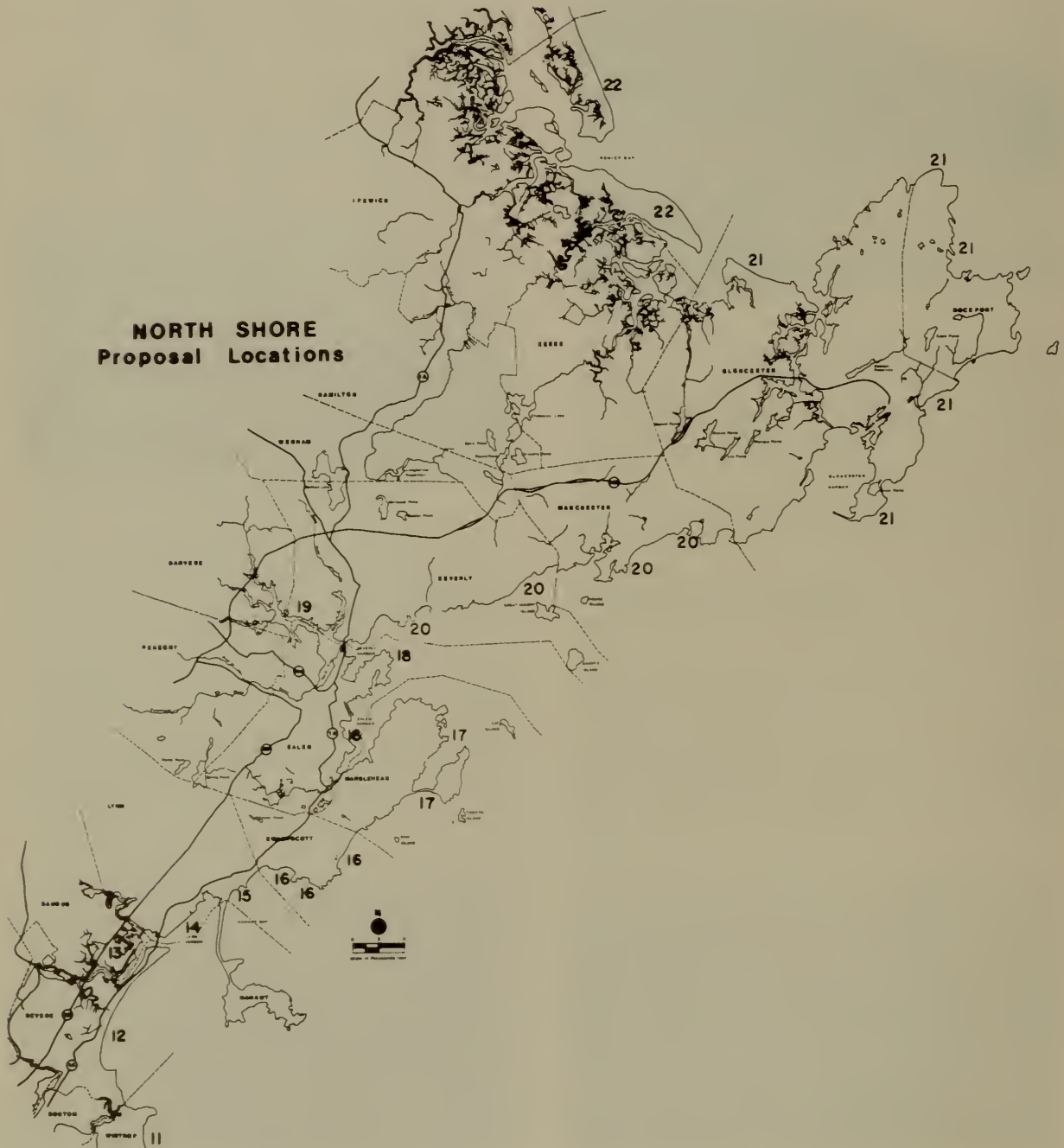
prehensive Plan, DNR 1972, prepared by the MAPC.

North Shore

The North Shore is a rugged and rocky coast with excellent beaches scattered throughout. The varied natural characteristics of the North Shore

provide numerous opportunities for coastal recreation activities.

Similar to the coastline of the entire state, the large majority of the North Shore coastline is privately owned. Population in the northeast section of the region, which includes the north shore, is expected to increase by 25 percent or



approximately 110,000 people by the year 1990.¹³ These new residents will exert new demands for open space and recreation facilities, and a significant percentage of the anticipated new demand will be directed toward coastal recreation activities. If new areas along the coast are not made available for the public, existing public areas may be harmed by overuse.

The following program is designed to increase public access to the North Shore coastline as a whole. This is an attempt to meet existing and anticipated recreation demands, without exceeding the capacity of any one site.

(11) Winthrop Beach—Winthrop

For a distance of approximately one and one-half miles along the Atlantic Ocean coastline of Winthrop, the Metropolitan District Commission operates Winthrop Beach as a public recreation area.

The beach is heavily utilized by residents from Winthrop, East Boston, Revere and Chelsea. Considering the lack of public coastline in the commonwealth and the region, the MAPC strongly objects to any proposal that would endanger the usefulness of this area as a public beach. In particular, the MAPC is opposed to any proposal that would place an off-shore docking facility for oil tankers opposite Winthrop Beach. Oil spills are inevitable and in this instance they could have a disastrous impact on a heavily used public beach. The area off the coast of Winthrop should remain undeveloped.

(12) Revere Beach Reservation—Revere

Revere Beach, the first beach in the nation acquired for public use, is controlled by the Metropolitan District Commission. It has long been a popular destination for North Shore residents on hot, summer days. In addition to a long and safe beach, the area has been noted for its amusement park facilities. In recent years, however, Revere Beach has been in a state of decline.

Presently, the remnants of the amusement park are being removed as part of a privately financed urban renewal effort. Since the MDC



controls the beach area, they will work with the City of Revere and the developer to arrive at a final redevelopment plan. While we do not intend to provide a detailed redevelopment proposal, the MAPC recommends that the City of Revere and the MDC consider the following points:

1. The redevelopment of Revere Beach should in no way limit public access to the shoreline. Rather, one of the major objectives should be to maximize public access to the shore.
2. Parking should be removed along the entire length of Revere Beach and relocated behind planned or existing commercial and residential structures.
3. A vehicle free pedestrian boardwalk should be considered for all or part of Revere Beach Boulevard between the intersections of Revere Street and Revere Beach Parkway.
4. The scale of new development should be such that it does not destroy the views of the water and surrounding areas.
5. All efforts should be made to capitalize on the present availability of public transportation (MBTA Blue Line) to the site. Public transportation access should be encouraged over the use of private cars in all design proposals.

13. For the purpose of this plan, the North Shore includes the 14 coastal communities from Winthrop to Ipswich.

Hopefully, a redesigned Revere Beach will restore the area to the prominence it once enjoyed, while creating a new and exciting public recreation area.

(13) Saugus and Pines River Marshes – Revere, Saugus

The Saugus River and the Pines River, located on the Revere/Saugus boundary, drain approximately 750 acres of salt marsh. The marsh contributes to the food and habitat needs of waterfowl, shellfish and finfish. Also, the marsh is important for flood prevention efforts in this area.

Despite recommendations for protection of the marsh in the 1969 MAPC Open Space and Recreation Plan, significant portions are still being filled. This is especially true in the southern sections of the marsh in Revere, where extensive residential and commercial development has been permitted in the past five years.

It is recommended that the local conservation commissions with jurisdiction over this saltwater marsh exercise restraint in the issuance of fill permits. In addition, the Executive Office of Environmental Affairs should take an active interest in this area to insure that the public's health and safety is not being cast aside in the interests of private gain. The marshland should be clearly identified as a flood hazard and floodplain area on all local zoning maps, and its permitted use affected accordingly.

The state constructed a gravel embankment for the now defunct I-95 through the marsh and at present the Department of Public Works is studying what to do with this embankment. The MAPC recommends that, whatever the final DPW solution is, it should include safeguards against further degradation of the marsh and, at a minimum, should make provisions to prevent the erosion of the embankment into the marsh.

With any large tidal wetland there is always the potential for conflict between recreation use and open space/conservation use. The Saugus and Pines River marshes are no exception. There are many small boats that use the marinas in the Saugus and Pines Rivers. The New England River Basins Commission, in its *South Eastern New England Study (SENE)*, recommended that a new marina be developed in the Saugus/Pines

River area. The MAPC supports this recommendation only if the proposed marina is located in the Pines River where there would be the least danger of flooding and where filling would be minimal. Any new marina development, however, would have to consider and protect the ecological structure of the marsh, and its remaining natural characteristics.

(14) Lynn Harbor—Lynn and Nahant

Lynn Harbor, in its present state, is a mixture of industrial, commercial and residential uses, with little or no continuity or relationship to the coastline. The Harbor, as presently developed, falls far short of its open space and recreation potential.

Past MAPC plans have urged redevelopment of Lynn Harbor with an emphasis on recreation use. Except for a newly constructed MDC fishing pier near the mouth of the Pines River and a small public boat ramp near Blossom Street in Lynn, no additional recreation facilities have been constructed. Considering the recreation potential of Lynn Harbor, the MAPC reiterates the position, taken in its 1969 *Open Space and Recreation Plan*. Lynn Harbor should be redeveloped and significant portions of the redeveloped area should be used for coastal recreation purposes.

On the City of Lynn side of the harbor, a pedestrian boardwalk is proposed from the Pines River to the existing electric power station (approximately 3500 feet). It should be constructed on the property now owned by the Massachusetts Power Company. Recreational use of the utility company's land is not unusual. In fact, where feasible it is encouraged by the Massachusetts Power Company. Presently, there are minimal recreation facilities provided by the company on the site of the proposed boardwalk. While expansion of the industrial uses now on the site is possible, the MAPC recommends that the company provide a boardwalk with a width of 100 feet and upgrade the existing parking facilities. If carefully designed the previously mentioned proposals can be implemented without hindering future expansion potential. Also, to insure the protection of this portion of Lynn Harbor, it is recommended that the Power Company put a conservation restriction on that



portion of its property that can be used for public benefit. While a limited number of appropriately designed commercial uses could be located on the boardwalk, it should be primarily designed for walking along and viewing the harbor. The proposed boardwalk should be buffered from the existing highway and commercial uses by a screen of natural vegetation. The remaining portion of the shoreline in the City of Lynn, from the proposed boardwalk to Nahant, should be cleared of debris and dilapidated buildings and developed under the direction of the Lynn Port Authority in a manner consistent with its coastal location.

The harbor is now used by pleasure craft, and there are three yacht clubs and five marinas to serve them. This activity notwithstanding, Lynn Harbor has not achieved its full potential as a pleasure craft center. In past MAPC and Metropolitan District Commission plans, it has been recommended that the harbor side of the Nahant Causeway be developed for swimming. Due to pollution problems, poor flushing action,

excessive costs and the small numbers of people that could be served, the MAPC now does not recommend the use of this area for a swimming beach. Rather, the MAPC recommends that on the harbor side of the Nahant Causeway the Metropolitan District Commission expand its boat launching capability. This action would more fully utilize existing public property and provide more inexpensive boating facilities to the general public.

An imaginatively redeveloped Lynn Harbor could easily provide the region with a major new scenic coastal area and new boating opportunities. The MAPC anticipates that such open space and recreation reuse would also encourage new development along the portions of the harbor not used for open space/recreation purposes.

(15) Nahant, Lynn and Kings Beach – Nahant and Lynn

Nahant Beach is an extension of Lynn Beach and Kings Beach, the latter two being located on the



northern coast of Lynn. All three beaches are heavily patronized during the summer months. The Metropolitan District Commission has jurisdiction over all three beaches and, because of effective maintenance programs, all three beaches are in excellent condition. Spot rehabilitation and maintenance, therefore, are all that is needed for this foreseeable future.

(16) *Blaney Beach and Phillips Beach – Swampscott*

Similar to MDC beaches in Lynn and Nahant, Blaney Beach in Swampscott is a pleasantly designed and well maintained coastal area. It provides a pedestrian walkway along the coastline and, in a few instances, small parks with excellent views of the coast and ocean. Recently, Swampscott applied for federal funds to acquire

the 1.9 acre Chick Estate. The area will be a valuable addition to the public open space and recreation areas associated with the Swampscott coast. The MAPC recommends continuation of such improvements in this area.

After Blaney Beach, there are few significant public sections of the north shore until one enters Gloucester. Privately owned Phillips Beach, on the eastern coast of Swampscott, is a long and scenic stretch of shoreline which has potential for limited public use. It is recommended that the local conservation commission, with the cooperation of the land owners, institute a long range easement or acquisition program for the purpose of opening sections of Phillips Beach to the public. It is further recommended that any support facilities, such as parking, be strictly limited to reduce the traffic flow through the

adjacent residential area. Pedestrian and bicycle traffic should be encouraged. Carefully controlled access to Phillips Beach is necessary to insure that the existing residential area is not adversely impacted.

(17) Marblehead Coastline—Marblehead

Similar to Swampscott, most of the picturesque Marblehead coastline is privately held. The two largest sections of the coast where the public has access are Riverhead Beach and Back Beach, located off the causeway leading to Marblehead Neck. While public, they have limited parking facilities and are usually used only by local residents. Chadler Hovey Park, at the tip of Marblehead Neck, has a magnificent view. However, it has very limited parking facilities and only serves small numbers of people. Seaside Park on Marblehead Harbor has parking facilities, but a very small harbor frontage. Considering the beauty of the Marblehead shoreline and the limited access to it, it is recommended that the local conservation commission assign priority to a program that would use the state self help program to acquire property or easements along the coastline for public use.

The coastal area from Crocker Park to Peach's Point, including Fort Sewall, Gerry and Crownshield Islands should be given high priority in any program to increase public access to the Marblehead shoreline. Some of this area is already in public control (Crocker Park, Fort Sewall Island, Fountain Park) while Crownshield Island is administered by the Trustees of Reservations. Implementation of this proposal would link the existing publicly controlled areas, creating a continuous coastal park from Crocker Park to Peach's Point. Also, this section of the Marblehead waterfront abuts a very historic section of the town. A system of walkways and urban trails should be established that would link the proposed coastal park to this section.

(18) Salem Harbor—Salem

Salem Harbor and associated development is one of the most historic areas in the United States. Its national recognition draws visitors from all over the nation. The National Park Service operates Derby Wharf in Salem. This rehabilitated area restores, for public enjoyment, the Salem Harbor

of the 19th century. While Derby Wharf is a significant contribution in terms of historic preservation, it cannot and should not, by itself, meet the coastal open space and passive recreation needs of the people in the Salem region. The full open space and recreation potential of Salem Harbor has not yet been realized. In 1969 the MAPC recommended various programs to develop more open space and recreation opportunities in Salem Harbor. Today, these proposals remain valid and feasible.

The MAPC recommends that a continuous corridor of open space, public shoreline and historic sites be developed from the Marblehead-Salem town boundary to the Terminal Wharf area, thereby skirting Terminal Wharf and continuing to Winter Island, around the Neck to and including the shores of Collins Cove. The proposed open space system would provide a unique walk through some of Salem's most interesting historic and natural areas. The proposal would effectively tie the Derby Wharf area to the other historic and natural areas in the city. It could also encourage the growth of waterfront and visitor oriented commercial enterprises including shops, restaurants and marine facilities.

By designing its harbor, harbor islands and shoreline for public use, Salem could develop into the historic and recreation focal point of the north shore.

(19) Danvers River—Danvers, Beverly, Peabody, Salem

In the 1969 MAPC open space and recreation plan, the Danvers River was shown as a potential site for additional boating and coastal recreation facilities. The potential still exists, but planning and protection of the river must begin immediately. It is recommended that four communities immediately affecting the river, Danvers, Beverly, Peabody and Salem, undertake a comprehensive plan for the river. The plan will guide all future land use decisions concerning the Danvers River, and coordinate efforts in use of existing laws. Included in this plan should be the re-examination of previous proposals to dam parts of the river.

In terms of open space and recreation, the first priority should be to insure water quality so that walking and fishing along the shoreline is

possible and pleasant. Also, it is recommended that more public access be developed along the river to complement the recently completed public boat ramp in the Porter River and similar facilities.

Additional open space projects should include coastal parks, picnic areas and walkways. The entire redesign of the river shoreline should be guided by an overall landscape and architectural design plan. Conservation of natural areas associated with the river, such as its source in marshes north of Route 128 in Peabody and Danvers, should also be included in the plan. When rehabilitated and redesigned, the Danvers River will be an important new addition to the open space and recreation system of the metropolitan region.

(20) Beverly-Manchester Shoreline—Beverly, Manchester

The shoreline of Beverly and Manchester is typical of the north shore with its rocky, uneven small sandy beaches. Historically, this area was controlled by large private estates, whose careful maintenance helped preserve much of the natural characteristics of the shoreline.

In recent years, however, many estates have been sold and subdivided, resulting in more development adjacent to the coast and a loss of natural coastal characteristics. This area provides a look at the natural New England coastline. It should not be lost to residential development.

To ensure the preservation of the scenic areas that are now privately held, it is recommended that conservation commissions and private charitable trusts acquire lands wherever possible along the Beverly-Manchester shoreline. In many instances, some of the large landowners may be willing to place a conservation restriction on their property which will be binding to all future owners. Securing conservation restrictions Manchester and Beverly should strive to link the existing segments of public shoreline in this area and provide shoreline walks for the public as at Newport, Rhode Island. Also, they should concentrate on those areas where imminent subdivision will result in a loss of the natural characteristics of the coast. Hopefully, immediate action will preserve some of the most scenic coastline in the region for public enjoyment.

Shoreline facilities which could be designed for increased public use in this area should also be carefully regulated to prevent environmental damage from overuse and disruption in residential areas. Some areas should be developed for swimming, such as the area south of West Beach in Beverly; while others should be developed for strolling, bicycling and scenic views. It is recommended that cars be strictly controlled by limiting number of available parking spaces.

(21) Cape Ann—Gloucester and Rockport

Cape Ann boasts some of the most unique coastline found on the North Shore. In general, the coast is rugged and jagged. However, tucked away in numerous coves are fine beaches, suitable for walking and swimming. Cape Ann is also rich in history; Gloucester was a famous early American port. Today Gloucester and Rockport are active artist colonies and major tourist attractions. Most of the coastline of Cape Ann is privately owned and those areas open to public use are experiencing overcrowding, especially during the summer months.

Two of the larger and more popular beaches open to the public are Good Harbor Beach and Coffins Beach (Wingaesheek Beach). Good Harbor Beach, located on the southeastern portion of the peninsula, has a beautiful deep sandy area with a relatively intact primary dune system. The area is heavily used despite inadequate parking conditions. Erosion, which has been a problem in the past, is presently under control and, in some areas, natural forces are rebuilding the supply of beach sand.

Considering the value of the beach, it is recommended that the city carefully monitor the erosion rate in an attempt to forestall any future erosion problems at Good Harbor Beach. It is also recommended that the City of Gloucester examine the possibility of expanded parking facilities in this area, while strictly enforcing parking regulations that would reduce the amount of illegal and hazardous parking that now exists.

Coffins Beach (Wingaesheek Beach) is the other major public beach on Cape Ann. Actually, the beach is divided into two sections, public and private. On a hot summer day the public section is very crowded while the private section has very few users. The private section represents



the last major private use area in an area of public accessibility that stretches from Plum Island to the city owned section of Coffins Beach. Thus, except for the private section of Coffins Beach, all of the oceanfront along Ipswich Bay is open to public use. For all of the publicly accessible coastline in this area, however, only Coffins Beach can safely be used for active recreation by large numbers of people. *The MAPC recommends state acquisition of the private section of Coffins Beach.* This action will provide public access to all points along the coastline of Ipswich Bay and it will provide the residents of the region with a coastal area that can support both active and passive recreation. Also, the new public beach will reduce the severe crowding at the present facility, which may lead to environmental damage to the site.

It is possible to acquire only the beach portion of the properties abutting Coffins Beach, although this may be a very long process. *The MAPC recommends acquisition of the residential area* which will allow for public support facilities

such as parking, bathhouses and new roads to be constructed.

Considering that the City of Gloucester now operates the existing public facility, and that the state will have to operate the new public facility, and provide numerous new support facilities, it is recommended that Gloucester transfer its property to the state and that the entire area be operated as a state beach.

The acquisition of Coffins Beach is the MAPC's priority project for the North Shore. The demand for additional beach is clearly evident in this area. The solution to the problem is evident, but controversial and precedent setting. The MAPC believes the needs of the people must be recognized, and the acquisition of Coffins Beach will be a step in the direction of providing uncrowded, pleasant recreation areas.

Aside from the attraction of its beaches, Cape Ann and Gloucester Harbor in particular, are popular pleasure boat centers. However, to get one's boat to the Annesquam River, where most boats are moored, one must use the very

small Blyman Canal Drawbridge over Route 127. During summer months the operation of this bridge tends to back up traffic leading into and out of downtown Gloucester or conversely, back up boat traffic when vehicular traffic is allowed to proceed. The MAPC supports proposals of the Massachusetts Department of Public Works to construct a new bridge in this area, one which will allow most pleasure craft to pass into the harbor without delaying vehicular traffic.

While Gloucester Harbor is a boating center, it has little public shoreline. It is recommended that additional shoreline be acquired by the city along the harbor. Top priority should be accorded to the Eastern Point area, which occupies a position at the mouth of the harbor. While part of Eastern Point is controlled by the Audubon Society and the Essex County Greenbelt Association and can be used by the public, it is overcrowded. More public acreage is needed to prevent overuse and meet current demand. Also, expansion of the Eastern Point open space and recreation area should cause minimal disruption to surrounding non-open space land uses.

As stated earlier, the area has thriving artist colonies, and Bearskin Neck in Rockport is possibly the most popular. During the summer months it is severely overcrowded with tourists and cars. If present conditions persist, the quality of the area will surely diminish. Considering the present demand, *the MAPC recommends an expansion of the public coastline in the vicinity of Bearskin Neck.* The expansion should be one of added space, not necessarily added facilities, such as new parking or commercial areas. Rockport is presently planning to expand public access on the old Harbor area by redeveloping middle wharf. The MAPC supports this action and suggests that it is an appropriate beginning for a program of increasing public access to the coast in the Rockport (Bearskin Neck) area.

Halibut Point in Rockport is a rugged coastal area administered by the Trustees of Reservations and open to the public. It provides magnificent views along the Ipswich and Essex coastline, and is a favorite location for seaside walks and picnics. The reservation itself is small and has limited parking facilities for the demand it generates. While parking capacity should be regulated to insure the integrity of the area, the

coastline adjacent to Halibut Point should be acquired and the reservation itself expanded to provide more picnicking facilities. The expanded public area will also require a new traffic circulation system that allows for access, but does not alter the character of the site. Currently, the state has moved to acquire 52 acres in this area. It is recommended that the state work in conjunction with the Trustees of Reservations and others to acquire as much of the coastline and associated uplands in this area as possible.

(22) Ipswich Bay—Essex and Ipswich

North of Cape Ann lie the Towns of Essex and Ipswich. The coastline of these communities is radically different from that of Gloucester and Rockport. It is a low coastal plain, dominated by inlets and the most extensive salt water marsh on the north shore.

There are two large areas in this region set aside for public benefit, Crane Reservations at Steep Hill, Castle Neck Beach, Hog Island and



other islands; and the Parker River National Wildlife Refuge adjoining the state and federal properties at Plum Island, operated by the U.S. Department of the Interior. The number of visitors to both areas is limited by restricted available parking spaces. Taken together, the Parker River National Wildlife Reservation and Crane Reservations can accommodate a large number of visitors; however, overcrowding does occur and endangers the fragile dunes and nesting areas of terns.

The wetlands adjacent to these public recreation areas are privately owned for the most part. The private areas, however, are subject to local and state wetland regulations. It is recommended that these regulations be strictly enforced. A large portion of the banks along the Castle Neck River are now covered by conservation restrictions donated by the owners to the Trustees of Reservations and further donations are anticipated. Hopefully, this program and the Coastal Zone Management Program, which is just beginning in Massachusetts, will provide further protection for these valuable wetland areas.

As we have seen, there are local, state and federal regulations concerning wetlands. Uplands, however, rarely have such protective regulations, even though they should be protected because of their ability to safely absorb much of the demand for active recreation that occurs near coastal locations. Presently, acquisition, easement, zoning or gifts are the only methods available to protect uplands associated with the coast. An area of particular beauty and passive recreation potential that has recently been protected by gift (via the Trustees of Reservations) is Hog Island. This area is located at the confluence of the Essex and Castle Neck Rivers, and is one of the most dramatic glacial drumlins on the entire Massachusetts coastline. About half of the island is heavily forested, but there are enough cleared areas to provide magnificent views of the coastal marshes of Essex and Ipswich and beyond. The MAPC urges continued cooperative efforts by public and private conservation agencies to protect the open space values of the salt water marshes and associated uplands of Ipswich Bay.

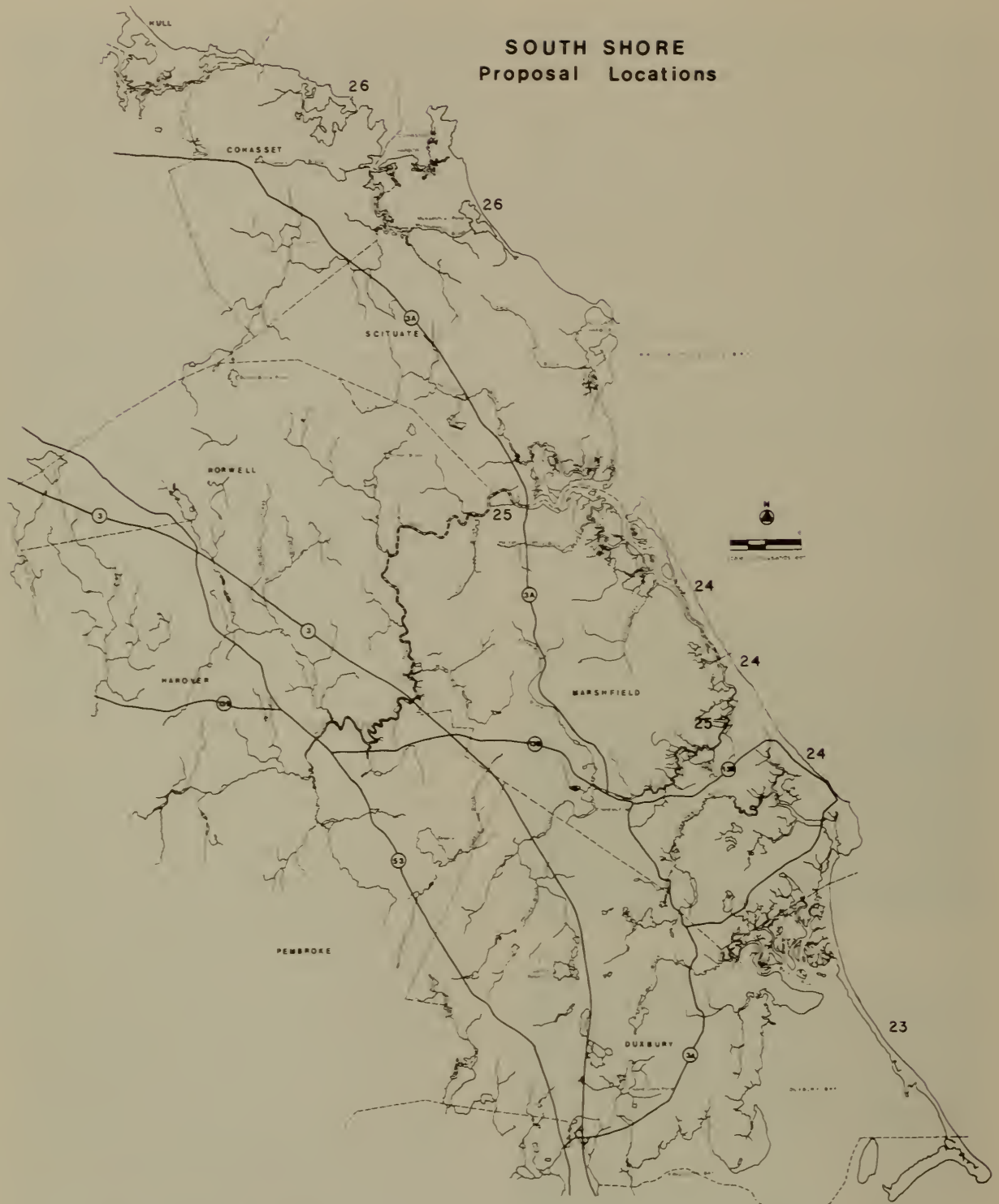
South Shore

Compared to the North Shore, the South Shore has more extensive stretches of sandy beach and relatively good highway access. These two factors combine with warmer water to make the South Shore coastal area a truly regional recreation attraction while the North Shore tends to attract users mainly from surrounding North Shore communities.

In addition to the large number of visitors using the coastal areas in the summer months, the South Shore area communities are expected to exhibit the fastest population growth during the next 20 years. An increase of 200,000 is anticipated by 1990. At present rates of land consumption, the new population will need approximately 15,000 acres of open land to accommodate housing and transportation needs.

Choosing which land will be developed and which will remain open will have a profound effect on the quality of the South Shore and its attractiveness as a place to live. Certain potentially excellent residential sites are also potentially excellent recreational areas. However, there are far fewer suitable sites for recreational and open space use than for housing. If potential open space and recreation resources are preempted for private use, the entire region will suffer.

Considering the attraction of the South Shore coastline, the increasing population and the large percentage of the South Shore coastline that is privately held, the need for expanded shoreline open space and recreation areas is acute. Based on demand estimates developed in the 1970 *Massachusetts Outdoor Recreation Plan (SCORP)*, approximately 60 percent of the new residents will choose swimming as a favorite summertime activity. Some people will patronize freshwater facilities, others will have private pools, but the great majority will be looking for a way to get to saltwater. At present, public beaches are too few to effectively handle the demand and the situation will deteriorate if new facilities are not developed. Boating and coastal picnic areas must also be expanded if recreational demands on the South Shore are to be met.



(23) Duxbury Beach—Duxbury

Duxbury Beach is the most prominent and most important regional open space and recreation

resource on the South Shore. It is a fragile three-mile sand spit stretching from Marshfield to Plymouth. The major portion of the beach,

however, lies within the Town of Duxbury. Duxbury Beach is operated by the Duxbury Beach Association and is open to the general public. Parking for the public is available at the north end of the beach for a nominal fee. Residents of Duxbury can park on the beach side of Powder Point Bridge, providing they have a sticker.

While the beach is open to the general public, the total number of people using the area is limited by a variety of existing factors, most notably the narrow access road through Marshfield and by Powder Point Bridge in Duxbury. Thus, even on the hottest days available public and town parking is usually adequate.

Considering the fragile nature of the beach, the MAPC recommends that the present level of use be maintained. Thus, while Powder Point Bridge should be maintained to insure structural safety, it should not be expanded to accommodate increased traffic. Also, the present number of parking spaces should be maintained or, at most, slightly expanded.

The Town of Duxbury has, in recent years, been developing a greenbelt system, much of which is comprised of coastal and inland wetlands. Many of the wetlands included in the system are of very high value as habitat for waterfowl, fish and shellfish, according to state authorities. The major sections of the system include the Duxbury Marsh, the Duck Hill River area, and the area from Island Creek Pond north and east to Garside and Wright Reservoirs. These extensive and picturesque wetlands are preserved either by restrictive orders under the Coastal Wetlands Act, or have been acquired by

Duxbury. Aside from their aesthetic, flood control, and wildlife habitat values, these areas can be used for boating and fishing purposes.

In general, the coastal marshes, creeks and estuaries contribute much to the character of the town and the shore line neighborhoods. They also provide an excellent framework for the local open space system by providing continuous greenbelts through built-up and developing areas. *The MAPC strongly recommends continuation of the program to protect and preserve the salt marshes along the Duxbury coast, until all of the ecologically sensitive areas are protected or controlled by the public.*

(24) Marshfield Coast—Marshfield

Similar to Duxbury, Marshfield has significant coastal wetland areas; the most extensive and important is Green Harbor Marsh in the south-east portion of the town. Parts of this area have been acquired by the town, while other sections are protected by the Coastal Wetlands Act. It is recommended that both of these methods of wetland protection be continued and eventually supplemented by the Coastal Zone Management Program and by flood plain zoning.¹⁴

Green Harbor Marsh, discussed above, is also an important part of the proposed regional open space plan since it is the major link between the Duxbury open space system and the proposed open space areas in the South River Basin. It is a key open space element for the South Shore.

Marshfield Beach (Humarock Beach) is one of the few barrier beaches in the state. It is long and well sanded, and is a favorite location for summer cottages (many of these cottages are located in the Scituate portion of the beach). As a result, most of the beach is privately owned and cannot be used by the public, even though increased use would not cause ecological damage. It is recommended that the Marshfield Conservation Commission (and the Scituate Conservation Commission where applicable) institute a long range acquisition program to acquire property along the beach for public use. Eventually, this program will allow for more



14. Coastal Zone Management Act 1972. See existing Implementation Techniques.

public participation on one of the largest beaches on the South Shore.

While it is recommended that more of Humarock Beach be open to public use, it is also recommended that local authorities with the aid of state agencies set limits on the total number of people allowed to use the facility at any one time. Also, in conjunction with any design for the new public areas, a parking and circulation plan should be developed by town and state agencies to insure good access to the facility and minimize the impacts on the town's residents.

(25) North and South River Marshes — Marshfield, Norwell, Scituate

The North and South River Marshes total almost 4,000 acres in the Towns of Marshfield, Norwell, and Scituate. Tests have indicated that these marshes rank exceptionally high in waterfowl, shellfish and finfish evaluations. Their natural resource value was deemed great enough by state and local authorities to be eligible for management as a National Wildlife Refuge. Plans for their acquisition and protection have been developed since 1965, but due to numerous problems not related to the quality of the area or the efforts of local agencies, only limited action has been taken. Presently, the Trustees of Reservations protect part of this area in the form of the Norris Reservation and, in general, the marshes are protected by the Coastal Wetlands Protections Act. Hopefully, these restrictions will be supplemented when these areas are designated as sensitive coastal areas in the Coastal Zone Management Program. Where ecologically possible, however, the use of these areas for boating, fishing and nature interpretation should be encouraged.

(26) Scituate and Cohasset — Scituate and Cohasset

To meet the demands of future residents and to ease the burden of proposed public beaches in other South Shore communities, new public beach areas should be developed in Scituate. Mann Hill Beach in Scituate is developed with private cottages, but not as extensively as some areas along the South Shore coastline. It is recommended that Scituate adopt a program similar to Marshfield and begin to purchase



beach front property as it becomes available, using the state self-help program as a financial aid. Some parts of the Mann Hill Beach area have little or no development. These areas should receive top priority in any acquisition program. Access to this area is more difficult than at Hummarock Beach in Marshfield. An access route would have to be carefully designed by town and state officials to reduce access and circulation problems.

Eventually, public areas at Mann Hill Beach and Hummarock Beach will supplement the existing supply of public beaches on the South Shore, and alleviate some of the coastal recreation deficiencies that are now encountered.

Along the coast of Scituate there are four topographically interesting areas with excellent views of the surrounding countryside and ocean. They are known as First, Second, Third and Fourth Cliffs. With the exception of Fourth Cliff, which is now used as a recreation area for military personnel, the cliffs are all intensively developed with only local access. For the First, Second and Third Cliffs, it is recommended that open space easements be acquired for public use along the coast, and in a few selected inland

locations. The easement acquisition program should be administered by the Town of Scituate. Passive use by limited numbers of people should be encouraged.

Fourth Cliff, however, should be acquired when and if it becomes available. This area, in contrast to the other three cliffs, should be developed for more intensive public recreation. In addition to public acquisition of parts of the cliffs, and possibly prior to it, an erosion control program should be instituted to prevent excessive washing out of the cliffs.

The Glades, an area of approximately 80 acres, is another distinctive coastal area in Scituate. In previous MAPC plans, this area was recommended for public use. Public use on a scale previously recommended now seems impractical. The MAPC now recommends that scenic easements be secured along the coast of this area to insure the enjoyment of thousands of people who have found the roads in this area provide some of the most scenic views in the MAPC region. This recommendation should be implemented by the local conservation commission.

The coast of Cohasset also has many scenic areas worthy of note. While no large public facilities are recommended along this section of coastline, there are numerous small beaches that are accessible to town residents that should be carefully maintained such as Pleasant Beach, Sandy Beach and Sandy Cove. Also, the scenic views along the coast of Cohasset should be preserved. As in other communities, this will be the responsibility of the local conservation commission. In many instances, voluntary measures may prove effective, in other instances, in order to keep scenic views, the local conservation commissions must be ready to acquire easements for the public benefit or work with land owners to secure conservation restrictions.

FRESH WATER RESOURCES



This chapter discusses the open space and recreation value of rivers, wetlands and ponds.

The section concerning the major rivers in the region can best be described as a summary of other MAPC reports concerning rivers and their use. Specifically, the reader is referred to Volume 3, the *Mystic, Charles and Neponset Rivers*, which contains the Council's official policy concerning the use of the region's rivers.

The chapter presents policy guidelines for fresh water resources, and includes specific policy statements for the use of rivers, wetlands and ponds. Following each specific policy section is a program of recommended actions.



Background

The MAPC area is well supplied with surface water which is fairly evenly distributed throughout the various communities. According to the latest surveys, there are 52 established Great Ponds (more than 10 acres in size in their

natural state), 9 important rivers and approximately 100,000 acres of wetland and swamp.

The demand for fresh water is almost limitless and increasing steadily because of the varied uses of fresh water. Fresh water is now rivaling land as an environmental problem for

human survival. Its primary use is for public water supplies; however, recreation, wildlife habitats, industry, and agriculture are also all dependent on fresh water supplies. Therefore, fresh water resources must be carefully managed to provide an adequate supply for all users.

While the MAPC recognizes the demand for present and future drinking water as the prime use of fresh water resources, it also sees the need for more fresh water recreation and conservation areas.

As indicated earlier in this report, water recreation is in high demand throughout the region. Increased use of fresh water resources could alleviate the present shortages in water-oriented recreation, ease the burdens on coastal areas, and reduce the need to travel significant distances to water-oriented recreation areas.

During the past five years, there have been various studies and programs designed to increase the supply of fresh water in the MAPC region. While the MAPC supports these efforts, it suggests that future studies and programs should also stress the need for fresh water recreation areas. The public already owns large amounts of land associated with watersheds. With careful planning we should be able to use these areas for open space and recreation purposes.

This section of the plan will focus on the potential of increasing recreational use of fresh water resources while not impeding its use as a public water supply.

Policies

- **Pollution**

Considering that many of the most polluted rivers and ponds are those directly adjacent to the greatest number of potential recreation users, it is imperative that pollution problems be eliminated. It is essential, in most instances, to raise and maintain the standard of quality of the region's water to a general "B" classification. This standard means that the water is:

1. suitable for bathing and other water contact sports;
2. acceptable for public water supply with appropriate treatment;

3. suitable for agricultural and certain industrial cooling and process uses;
4. useable as an excellent fish and wildlife habitat; and
5. contributes excellent aesthetic value. It should also be stressed that where "A" quality water exists, it should be the policy of all agencies and groups to maintain this level of water quality.

- **Water Supply Areas**

The ponds and reservoirs used for public water supply are major open space assets of the Metropolitan Area, but they and the watershed lands around them are available for "use" only in ways which will not jeopardize the quality of drinking water. When, as, and if filtration treatment and purification are provided, water contact sports may be feasible.

The kinds, amounts, and costs of recreational uses of water supply areas should be the responsibility of the agency in control of the water supply. In most instances this is a public agency.

- **Option for Recreational Use**

No watershed or publicly controlled water supply land should be altered or disposed of in such a way as to preclude future open space and recreation use. Recreation agencies should have first option on reuse of any watershed or water supply area.

- **Watershed Associations**

The establishment and further development of private watershed associations with participation of public agencies should be encouraged within each watershed of the region. The associations should work with local, state and federal agencies on all matters affecting water resources in their watershed. Also, they should strive to inform and educate the general public concerning water resources.

- **Management of Watersheds**

The whole watershed is the natural and logical unit for management of water

resources. Water removed from and returned to a river or stream should be monitored and controlled by one organization or a cooperative group of municipalities.

- **Dump Sites**

All dump and sanitary landfills presently abutting riverfront and wetland areas should be closed as soon as alternative sites can be found, and no new developments of this nature should be allowed on soils associated with a river's 100-year floodplain.

Program

The Rivers

The major rivers of the MAPC region are: the Mystic, Charles, and Neponset in the more densely populated portions of the region; and the Ipswich, Sudbury, Concord, Assabet, North and South Rivers in the outlying areas. These rivers

offer great opportunities for a continuous system of linear parks throughout the MAPC region which would satisfy a large part of the demand for water-oriented recreation. The rivers are similar to the coast in value and variety of recreational opportunities. For these reasons, policies and programs are proposed for cleaning, conserving and protecting the rivers for public use and enjoyment.

Policies

- **Public Ownership**

Public ownership or control of river banks of all major rivers in the region should be a policy of local, regional and state agencies.

- **Floodplain Zoning**

In all communities, floodplain zoning based on 100-year floodplain records should be encouraged. Also, communities should be encouraged to join the HUD Flood Insurance Program.

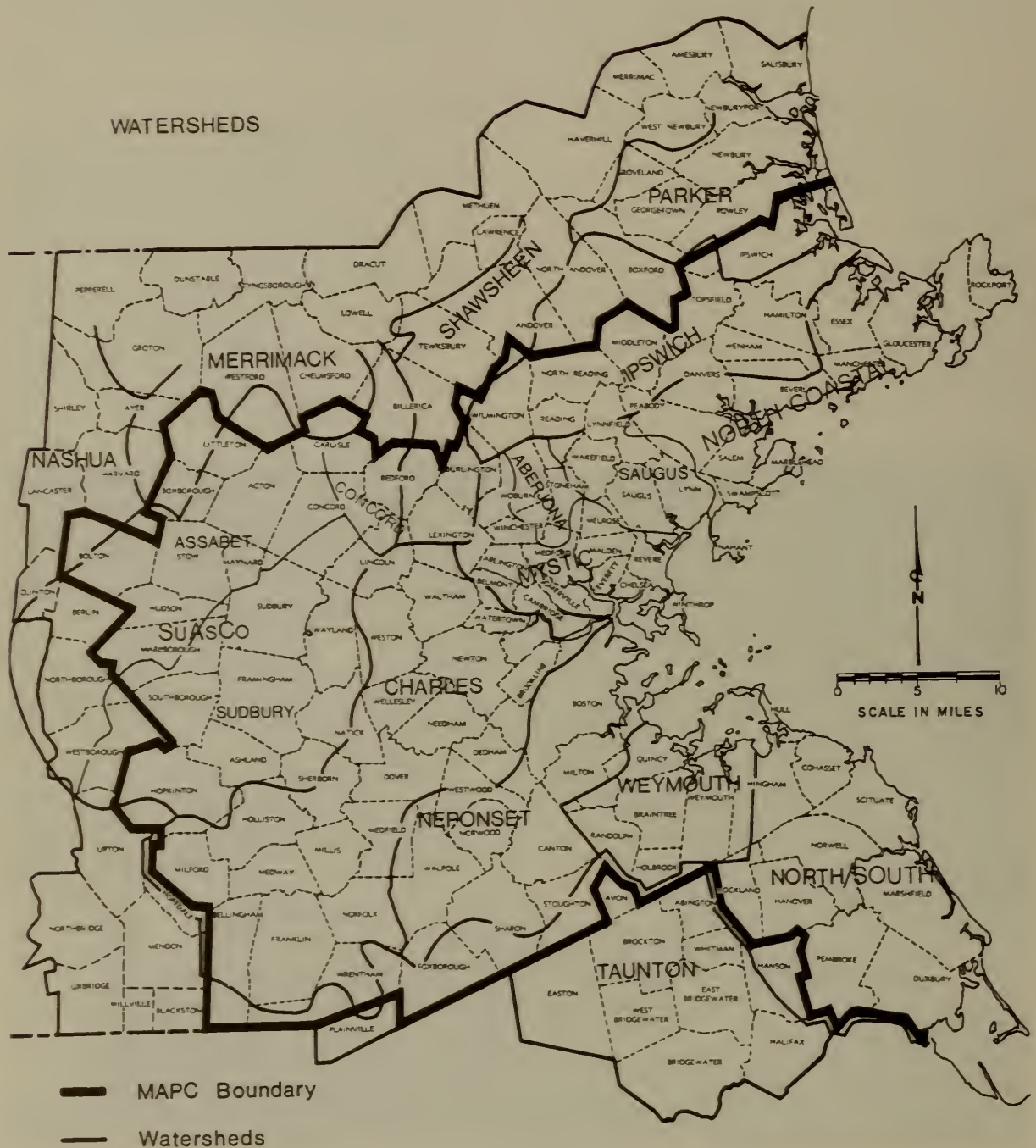


- **Riverfront Development**

New development consistent with riverfront location such as parks, picnic areas and athletic areas should be encouraged by all public agencies.

- **Riverfront Zoning**

Riverfront districts in zoning ordinances and bylaws that will require aesthetic and environmentally sound use of riverfront property should be adopted by each community.





- **Alteration of Natural Characteristics**

Channelization projects should be carefully considered and approved by public authorities only if it is shown without reasonable doubt that they are necessary for public health and safety.

- **River Flow**

During dry seasons it should be general policy to maintain the flow of river systems. Suggested methods to complement this policy are flow augmentation and control of use of underground water.

- **Run-Off**

The quality of run-off should be monitored within each watershed to determine its impact on river and stream pollution levels. New development should be required to restrict run-off levels by use of more natural materials and other design techniques such as gravel parking lots, and increasing the natural vegetation around any new building. Existing development should also be required to reduce their run-off if it can

be determined that it is harmful and can be minimized without damaging the character of the development.

- **Tributaries and Wetlands**

Tributaries and fresh water marshes associated with major rivers in the region should be preserved for conservation, wildlife habitats and recreation purposes through the use of floodplain zoning, acquisition and conservation restrictions.

- **Pesticides**

The amount and types of pesticides used in agricultural areas and the amount of salt used on roads in all areas should be carefully monitored to determine their effect on water quality.

- **Private Recreation Areas**

Through the use of tax incentives, such as those provided for agriculture, encourage the maintenance and the expansion of private recreation areas along the rivers that are open to the public on a non-commercial basis such as the Trus-

tees of Reservations and the Massachusetts Audubon Society.

- **Woodland Management**
Woodland management programs should be designed to strictly limit the cutting of trees along riverbanks by local, regional and state agencies.
- **Tree Planting**
Tree planting programs should be established along river banks that have suffered erosion and degradation because of poor land use policies.
- **Power Boats**
The use and speed of power boats on rivers should be limited because of bank erosion and danger to canoes and sailing craft, while encouraging the use of rowing and sailing craft.
- **Riverfront Parks**
Certain areas along the rivers should be designed and managed by public agencies as open areas offering a variety of recreational opportunities.
- **Swimming**
Swimming and other water contact sports should be located in those rivers where water quality and bank conditions allow. Also, sites for specific fishing locations should be carefully selected. Uncontrolled fishing areas, which may cause bank erosion, should be discouraged.
- **Linkages**
Large public upland areas near the course of the river should be linked with public property along the river in an attempt to use the rivers of the region as the major linking elements of the regional open space system.
- **Headwaters**
The headwaters of rivers and streams are vital to the amount and quality of water supply in any stream. These areas should be given priority in any local, regional or state program to protect rivers and streams in the MAPC region.

Mystic, Charles and Neponset Rivers

The Mystic, Charles and Neponset Rivers were the subject of a major study and report by the MAPC in 1969, Volume III, *The Mystic, Charles and Neponset Rivers*. The following discussion highlights some of the recommendations of the 1969 report supplementing the earlier recommendations with additional proposals.

The preservation of the banks of the three rivers for public use and enjoyment has been a major objective of open space plans for Metropolitan Boston since the original project for a Metropolitan Park System was developed in 1892-93. Long stretches of these rivers have been acquired by the Metropolitan District Commission and some, unfortunately, have been sold or misused.

The program designates methods for more effective use of the rivers as regional public open space and recreation areas.

The Mystic River

The Mystic River rises in the Aberjona River and Mystic Lakes in Winchester and empties into Boston Harbor. Of all the rivers in the MAPC region this is the most heavily industrialized and polluted, particularly in the lower half.

Because of its use as an industrial and commercial river, few recreation areas have been developed along the Mystic River banks. However, above Medford Center, the banks of the river and lakes have been part of the Metropolitan Park System for 75 years.

While the lower portions of the river should continue to be used for industrial purposes, the area between the Earhart and Craddock Dams should be developed as a recreation resource without limiting its role in the region's economy. To implement this, MAPC recommends a program which includes the following:

- A pollution control program designed to improve water quality to a general "B" level of classification should be developed by a joint effort of the state and affected local communities. The Mystic River Watershed Association should be the officially designated agency through which the local towns provide input to the water quality plan.



- The Mystic River and Middlesex Canal were among the first such waterways in the nation, and as such they are of great historic value. Plans to preserve these areas as historic parks have been developed and supported by the MAPC. These proposals provide an opportunity to develop recreation facilities on land which has recently been in an abandoned or industrialized state. To prevent diversion to non-recreation uses, the MAPC recommends immediate development of the Middlesex Canal as a linear park. For a more detailed discussion of this proposal please see Reservations Chapter—Middlesex Canal.

- Although the lower portions of the river are primarily known for their commercial and industrial uses, there are many areas that can be developed into community parks. First priority in this program should be assigned to the shoreline of the now deactivated Chelsea Naval Hospital. When this property is formally acquired by the City of Chelsea, the flat coastal portion of the site, which has historically been used for recreation purposes, should be used as a riverfront park (For further details see the program section for Boston Harbor).
- The western banks of the Mystic Lakes have been fairly heavily developed. This is in contrast to the extensive public park land on the eastern banks of the lakes. Nonetheless, there remain areas along the western banks that should be acquired for public purposes. One such site that has recently been acquired is a 2.5-acre parcel in Arlington. While the 2.5-acre site may not be considered "regional" in nature, it is part of an effort to preserve the Mystic Lakes, which have regional recreation and historic importance. The MAPC, therefore, supports Arlington's efforts along the lake shore and urges further acquisition where possible.
- While the above mentioned project should be a local undertaking, the general relandscaping and redesign of the riverfront will be the responsibility of the MDC. The MDC, which controls most of the public riverfront in the form of the Mystic River Reservation, has recently announced plans for a multi-million dollar project to redesign the reservation. The MAPC strongly supports their proposals, and urges local action to supplement their efforts.
- The tributaries of the Mystic River are, for the most part, in a less developed state than the river itself. Many wetland areas are associated with the Mystic's tributary system. They should be protected, and in some instances, used for recreation purposes. For example, the

Mystic River Watershed Association has proposed that Mill Brook in Arlington be designed as an "urban brook" after the precedent of the San Antonio River in Texas. The MAPC supports this proposal, and urges similar treatment for the Malden River, the Aberjona, and Horn Pond Brook.

The Charles River

The Charles River, lying to the west and southwest of Boston, is the longest river wholly within the MAPC region. From its source in Hopkinton it flows some 80 twisting miles to its mouth in Boston Harbor. It is fed by numerous small tributaries and extensive wetlands along its banks. The Charles River Watershed consists of approximately 307 square miles and has a variety of development. Considering its length, location and large population (approximately 1.1 million people within the watershed), the river can be an easily accessible recreation resource for a large segment of the metropolitan population.

Of the three rivers discussed in the 1969 MAPC open space and recreation report, the Charles River has experienced the most activity in terms of rehabilitation. New public access points have been established, along with additional boating and fishing areas. Perhaps the most important development has occurred in terms of additional acquisition or restriction of the river's banks. The largest acquisition/protection program was put forth by the U.S. Army Corps of Engineers. The Natural Valley Storage Project will preserve 8,500 acres of wetlands along the Charles for flood storage purposes. This project has been approved by Congress and is awaiting full appropriation. Also, the towns along the Charles have developed an increased awareness of the river's intrinsic value and beauty and have been active in preserving this great natural resource.

Additional properties and restrictions have been given to the Trustees of Reservations and the Massachusetts Audubon Society in the Upper Charles section between the Natick Dam and the Norfolk Townline. In that same section of the riverfront portion of the Medfield State Hospital has been transferred to the Department of Environmental Management, under legislation

initiated by the Trustees of Reservations and constitute the Medfield/Charles River State Park.

To supplement the proposals of the MAPC 1969 Open Space and Recreation Plan and to continue improving the recreational and aesthetic value of the river, the MAPC recommends the following additional programs be implemented:

- Considering the great recreation value of the Charles River and its historic role as a swimming, boating and fishing facility, it is recommended that a water quality program be developed to raise the water quality to a "B" and, in some cases, a "B1" classification. It is further recommended that the state work closely with the Charles River Watershed Association to develop the necessary water quality improvement program.
- The source of the Charles River should be protected. Presently, the Milford Water Company controls Echo Lake, the source of the river. The company scrupulously maintains "A" quality water in the lake, while from time to time issuing a limited number of fishing permits.

While Echo Lake is protected from degradation, streams feeding into it are not necessarily safe from development and pollution. *The MAPC recommends that the streams north of Echo Lake be protected by the Town of Hopkinton.* Protection via zoning may be feasible in the short run, but to insure protection the MAPC recommends that Hopkinton acquire the banks of the streams with state financial assistance. While protecting the source of the Charles River, these areas could also be used for limited passive recreation purposes.

With public control of streams feeding into Echo Lake and the continued management of Echo Lake by the Milford Water Company, the source of the Charles River should be secure from development and pollution problems.

- The land now occupied by the Stigmatine Fathers (Elm Bank) in Dover is one of the most scenic areas along the Charles River. It is a prime example of



what the natural riverfront of the Charles River was like.

The Archdiocese of Boston is presently under contract to sell this area to the commonwealth for use as a location for the Massachusetts College of Art. However, there are legal problems and the sale may not be finalized.

The final resolution of the present legal problem notwithstanding, it is recommended that as a minimum the state should acquire the land adjacent to the Charles River to a depth of 500 feet. The Town of Dover should carefully regulate the type of development that occurs on the remainder of the site to insure that it is consistent with its river front location.

- Cutler Park is owned and operated by the Metropolitan District Commission. It is the last large fresh water wetland system within easy reach of the densely developed core communities. It is located east of Route 128, along the banks of the Charles River, as such it is an important part of the proposed Charles River Park System, and the proposed Charles River project (see Volume 3, *The Mystic, Charles and Neponset Rivers*).

Presently, the park is used for conservation and wildlife purposes, with limited recreation use. It has also been mentioned as part of the Army Corps of Engineers Charles River Natural Valley Storage Area Project.

Considering the very fragile nature of the wetlands in question, it is doubtful whether outdoor recreation can be justified on this site. Therefore, MAPC recommends continued uses of Cutler Park for conservation purposes only.

- The area near the intersection of Route 128 and the Massachusetts Turnpike (I-90) was once an amusement park known as Norumbega Park. Through the years much of the former parkland has been diverted to non-open space uses.

Presently, there is a 17-acre parcel of riverfront land in Newton near the area mentioned above, that is being

considered for private development. While much of the site cannot be directly associated with the river, it is strongly recommended that the portion of the site that is visually associated with the river be preserved for public use.

The proposed public area can be used for passive recreation purposes with funding available through the state's self-help program. While this project is small in comparison to many proposals made in this report, it is a fine example of local action. If imitated many times over, it will preserve a great regional resource, the Charles River.

- The Metropolitan District Commission is presently considering acquisition of parts of the former Watertown Arsenal that abut the Charles River. The MAPC strongly supports this intention and recommends that the MDC consider additional acquisition in the former arsenal site so that sorely needed recreation facilities can be developed in Watertown, a densely settled urban area.

While the majority of the proposed MDC acquisition will be used for passive recreation purposes, the potential for active recreation should also be considered.

- Magazine Beach, named for the magazine on Captains Beach, is an existing Metropolitan District Commission park adjacent to the Charles River in Cambridge. Historically, Captains Island was the site of earthworks for the protection of the Patriot encampment in Cambridge during the Siege of Boston (1775-1776). The area was acquired for park purposes by the City of Cambridge some 80 years ago. Present facilities are now being expanded and modernized to include baseball fields, open green areas, benches, a swimming pool and a boat launch. In years past, the area was a major river front swimming area. However, existing water quality is poor and swimming is no longer safe. While MAPC strongly supports the present expansion and modernization of Maga-

zine Beach, we also recommend that the present rehabilitation of this area not preclude the possibility of reinstituting swimming if and when water quality allows.

Further, MAPC recommends that the MDC improve the quality of its other park lands in the Charles River Basin area.

- The U.S. Army Corps of Engineers is presently constructing a new dam at the mouth of the Charles River which, when completed, will be turned over to the MDC for operation. The overall project includes an urban park which will be related to the Charles River. The MAPC strongly supports this project and the rehabilitation of this presently blighted area, which will provide needed recreation acreage to the core area.

Upon completion of the project the MDC is planning to extend Charles River Park to the new dam. The portion of the Charles River in question has been neglected, although its recreation and aesthetic potential is high. This is a very sorely needed project, which MAPC strongly supports and urges immediate implementation upon completion of the dam.

- Congress has approved the Natural Valley Storage Area project, developed by the Army Corps of Engineers, which will set aside 8,500 acres of wetlands along the Charles for natural flood storage. MAPC endorses this program for its obvious flood prevention value and its effect on the protection of wetlands in the Charles River Watershed. We also endorse the Corps' efforts to study the wetlands in question and determine their recreation potential. Some areas will probably be too sensitive to allow any form of use, but where recreation use is feasible (and does not limit storage capacity), we suggest that passive recreation use be allowed. This possibility would greatly increase the recreation value of the river.

- In recent years, the Metropolitan District Commission landscaping program has resulted in approximately 5,000 new tree plantings. This program must continue and be expanded.

In those areas along the river that are not under MDC jurisdiction, MAPC recommends that local communities develop landscaping programs as part of their annual public works budget. A strong local effort to landscape the Charles River will increase the possibility of restoring the river to its natural beauty. Funding for such a program is available through the U.S. Department of the Interior, Bureau of Outdoor Recreation.

Neponset River

Above Route 128, from its source in Foxborough, the Neponset flows through areas that are rural and suburban in character. Although the river falls quite rapidly in the upper portions, it is chiefly characterized by its sluggish meanderings through Fowl Meadows in Canton and Milton. Considering the development along the river from Route 128 to its mouth in Dorchester Bay, it is not surprising that it is heavily polluted in some areas.

With proper management the Neponset River could easily serve as a major linear park in one of the more densely settled areas of the region.

The following programs should be components of any effort to convert the Neponset River into a linear park. Except where specifically revised in this report, all previous recommendations of MAPC's 1969 report, Volume III, *the Mystic, Charles and Neponset Rivers* are re-endorsed.

- A pollution control program designed to alleviate the present polluted state of the river should be developed. The goal of this program should be a general "B" classification of the Neponset's waters. While bank conditions limit potential swimming areas along the river, the improved water quality rating would allow safe boating and fishing as well as increase the aesthetic value of the river.



It is recommended that the MDC and municipalities work closely with the Neponset Conservation Association, the MAPC and the communities in the watershed to develop a comprehensive water quality improvement program.

- The Metropolitan District Commission should supplement its present holdings along the entire length of the Neponset River, within the Parks District bound-

ary, by further acquisition of marshlands and river frontage. First priority should be assigned to the extensive marshes in the Canton area. Considering that many of the unprotected marshlands recommended for protection are outside the MDC Parks District, the district should be expanded to allow MDC control along most of the Neponset River.

In all instances, planning for the river should include input from all towns and agencies in the watershed.

- To fully utilize the river as a linear park, a bicycle and pedestrian trail system is recommended. In lower portions of the river, the trail system might well begin at the mouth of the Neponset River and terminate at the Trailside Museum in the Blue Hills. Some of the existing MDC land is presently sufficient for the development of such a pedestrian and bicycle trail system. There are sections that will require additional acquisition, and for short distances, the proposed trail system must share a right of way with automobiles (Truman Highway). However, the amount of acquisition required and the length of shared right of way are small. The bikeway would provide an alternative mode of access to the Blue Hills, the largest recreation area in the region. The resulting linear park would directly link the Blue Hills to some of the more densely populated areas in the region such as Dorchester and Quincy.

Along the upper portions of the river, a trail system can begin near the extensive marsh areas in Norwood and Canton and have as its focus the Blue Hills. The entire system, however, should be designed to make it possible to travel most of the length of the river by bicycle.

To complement the trail system, locally oriented boating, picnicking, and fishing areas should be developed adjacent to the river. These areas will provide alternate destinations along the bicycle and walking trails, and help to

alleviate open space deficiencies in the core area.

Since the present Neponset River Reservation is owned by the MDC, it is recommended that the acquisitions and improvements necessary to implement the proposal be the responsibility of the MDC.

- The Metropolitan District Commission owns and operates the Neponset River Reservation in Dedham and Canton. The area is predominantly wetland with passive recreation potential. Given the fragile character of the area, the MDC does not allow intensive recreation use. The MAPC supports this policy.

However, the MAPC recommends an extension of publicly protected wetlands along the Neponset River in Canton, Norwood and Sharon. The new acquisitions should be for conservation, wildlife and river management purposes. To accomplish this expansion, the MDC Parks District should be expanded

by the legislature to include Norwood and Sharon. If this proves to be impossible, it is recommended that local towns acquire these areas and operate them in conjunction with the MDC reservation to the north.

Considering the very fragile nature of the wetlands in question, it is doubtful whether outdoor recreation can be justified. While the extension of the Neponset Reservation will not necessarily result in new acreage that can be utilized for intensive active or passive recreation, it will protect the Neponset River which has numerous scenic views, and result in better flood management programs along the river.

Ipswich, North, South, Sudbury, Assabet and Concord Rivers

For the most part, the Ipswich, North, South, Sudbury, Assabet and Concord Rivers flow through both rural and suburban areas. Along the course of these rivers it is not unusual to find



extensive wetland and agricultural areas. Water quality of these rivers tends to be high when compared to rivers closer to the urbanized area, with generally "B" quality water and some stretches of "C" quality. Their natural setting and water quality provide the potential for numerous open space/recreation opportunities. In particular, the river systems listed add an important dimension to the regional open space plan—an opportunity to enjoy a river and its surroundings in a natural setting.

Protection of open spaces along these rivers was the central theme of the proposed Bay Circuit, and substantial portions of the proposed open spaces have been acquired by federal, state and local public agencies. Private groups such as the Trustees of Reservations, Massachusetts Audubon Society and other conservation trusts have also been active in the protection of these rivers.

The Ipswich, North, South and SuAsCo Rivers (Sudbury, Assabet, Concord) are the subject of Volume 6 of the "Regional Open Space Plan." Volume 6 "The River Systems Study," contains three reports and has developed detailed proposals for the preservation and use of the rivers and their adjacent lands. Although the report is still only in draft stage, the reader is encouraged to consult The River Systems Study. This report will not attempt to restate all the proposals contained in that report but important recommendations from Volume 6 are highlighted here:

- The protection of all wetlands associated with the river systems. In particular, permanent restrictions are recommended on all alterations of wetlands that involve the headwaters of rivers. The forms of protection cited in the report include floodplain zoning, state and local wetland ordinances, conservation restrictions and acquisition by public and private conservation agencies.
- The development of local and regional park facilities along the course of the river under discussion. The resulting numerous park proposals would utilize the river as a linear park with local and regional focal points. The proposed parks range from local fishing areas to

large passive recreation areas, such as Beech Hill in Rockland, on the North River and Bradley Palmer State Park in Ipswich.

- The development of erosion control programs along the entire length of the river systems. Natural planting programs are preferred but, if the steepness of the bank prevents development of strong plant growth, rip rap techniques should be employed.
- Woodland maintenance programs to encourage healthy tree growth and to create scenic vistas. In some areas, this program includes tree cutting restrictions along river banks. This program should be enforced by the appropriate state or local agency with control over the portion of the river in question.
- Public access points, their development and maintenance is a recurring recommendation in Volume 6. In general, the public access points are linked with proposals for new fishing, swimming or boating areas (usually non-power craft).
- The preservation of existing publicly controlled wildlife areas, and additional wildlife areas to be brought under some form of public regulation or control.
- Floodplain zoning based on 100 year flood levels and development restrictions that would allow riverfront development, only if it is consistent and compatible with its location.
- The continuation of riverfront agricultural activity, where feasible. These recommendations are generally intended to diversify the scenic experience along the rivers and to preserve existing privately owned open space.

The Ponds

Ponds of more than 10 acres in their natural state are classified as Great Ponds by the Commonwealth of Massachusetts (Commonwealth vs. Tiffany, 119 Mass 300 1876 and General Laws Chapter 91 s. 35), and are the property of the Commonwealth. Public access to great ponds is defined in the Colony Ordinance of 1641-47. The



Colony Ordinance provided that no town should appropriate to any particular person or persons any great pond containing more than 10 acres of land. It was also provided that any man might pass and repass on foot for the purposes of fishing and fowling, so long as he did not trespass on any man's corn or meadow.

The 1969 MAPC Regional Open Space and Recreation Plan illustrated the value of both Great Ponds and other ponds as open space and recreation resources. While some ponds have been protected by local and state action there is no program that can guide local communities and regional agencies in the preservation and wise use of this resource. In an attempt to provide such a program, the MAPC presents the following policies and programs as the basis for future actions concerning ponds and Great Ponds in the region.

Development Policies

- **Control**

Control over the Great Ponds has recently been unified under one state agency to insure direct administration and non-conflicting programs for use. As of July 1, 1975, legislation reorganizing the Executive Office of Environmental Affairs (EOEA) should remedy the present confusion. Under reorganization, Great Ponds will be under the jurisdiction of only the Executive Office of Environmental Affairs. The MAPC supports this action and urges the newly reorganized EOEA to extend its power to protect and wisely develop Great Ponds.

- **Multiple Use**

Multiple use of Great Ponds is essential. The ponds provide excellent potential for

swimming facilities within easy reach of large numbers of people. Sailing, canoeing, and limited motor boating where water acreage and conditions permit, should be considered. The development of these facilities is the responsibility of the state.

- **Right of Way**

The EOEa should institute a program designed to provide a public right of way to all Great Ponds that are not used for water supply. This program can be implemented by the state and local access boards. Also, where recreation demand indicates a need for water-oriented recreation, acquisition of additional shoreline and uplands should be considered.

- **Other Ponds**

Ponds less than 10 acres in size, but with local recreation value, and man-made ponds greater than 10 acres should also be protected from harmful development and, if possible, used for public recreation purposes. Depending on the magnitude of the project, local as well as state agencies should become involved in the above mentioned projects.

- **New Development**

New development, such as parks, picnic areas and athletic fields should be encouraged by local public agencies when not ecologically damaging.

- **Run-Off**

The quality of runoff should be monitored within each pond drainage area to determine its impact on the pond's pollution levels.

- **Pesticides**

The amount and types of pesticides used in agricultural areas, and the amount of salt used on adjoining roads should be carefully monitored to determine their effect on water quality.

- **Woodland Management**

Woodland management programs should be designed to strictly limit the cutting of trees along the banks of ponds by local, regional and state agencies.

- **Boat Usage**

The use and speed of power boats on ponds should be limited because of bank erosion and danger to canoes and sailing craft. The use of rowing and sailing craft should be encouraged.

- **Swimming & Fishing**

Swimming and other water sports should be located in ponds where quality and bank conditions allow. Also, sites for specific fishing locations should be carefully selected to minimize the potential for bank erosion.

Program

- Local communities where Great Ponds and ponds are located should prepare visual surveys and detailed land use plans for the uplands surrounding these areas. Particular attention should be given to lot sizes, drainage and pollution problems, new road locations and scenic view potentials. Specific regulations for the development of ponds and Great Ponds should be set forth in community master plans, the zoning ordinance, and the subdivision control regulations (where existing conditions allow).

No community in the MAPC region has, as yet, prepared specific standards on policies for pond uplands. The upland areas are environmentally critical because unplanned use will result in destruction of many characteristics of a pond and result in loss of a valuable natural and recreation resource.

- The EOEa and local agencies should institute programs to acquire land or conservation restrictions around Great Ponds, and other ponds of scenic and recreation value. Where possible, all acquired land and restrictions should be utilized for recreational purposes. State and federal funds can and should be utilized for the acquisition portion of this project.
- Every Great Pond should be identified with appropriate signs. Supplementary signs should be erected describing the natural history of the pond and specific

rules and regulations governing its use. The interpretive program should be developed by the EOEa, and administered by its Water Resources Division.

In conclusion, ponds in the MAPC region are numerous, but because of development patterns, lack of development funds, and divisions of responsibility, ponds are an underutilized source of public recreation potential. If access is provided to these water bodies and if state and local authorities develop feasible as well as funded plans, the ponds and their surrounding areas can be developed into a well distributed recreation resource for the entire region.

Inland Wetlands

Inland wetlands are a valuable natural resource under constant development pressure. Generally defined as any marsh, bank, meadow or swamp bordering on waters above the rise and fall of the tide, these wetlands perform certain vital functions such as regulating ground water supply and natural flood storage areas. Like the coastal wetlands, inland wetlands have recreational, wildlife and scenic characteristics that are impossible to duplicate.

Wetlands are a crucial factor in the stabilization of water flow. Wetlands absorb water in wet seasons and release it in times of drought. Without wetlands, the river and stream run off following rainfall increases markedly and can cause flooding. To replace this ingenious and natural system with dams and reservoirs is costly and often impossible.

Wetlands are also related to groundwater supply and its quality. Considering the increasing demands on fresh water, wetlands are important to planning of drinking water resources.

Flood control and domestic water supply are only two reasons why wetlands are extremely valuable and should be protected. The recreation value of wetlands is often underestimated. According to a state survey over 80 percent of the commonwealth's ponds and lakes of 10 acres or more are fed by streams originating in wetlands. Therefore, alterations of feeder streams and wetlands could have a marked effect upon the quality and quantity of water in these areas. The quantity and quality of available water directly affects the recreational value of the ponds and lakes.



Wetlands also have their own special and non-duplicative recreational values. Over 50 species of birds and 150 different flowering plants are dependent on wetland habitats. The areas are therefore excellent for hunting and nature study. The wetlands of the MAPC region can support increased active recreation including fishing, hiking, boating and camping. In winter, wetlands (except those over peat or bog type soil) provide ice skating areas which, because they are shallow, freeze earlier and remain safer.

Since the publication of the 1969 MAPC *Open Space and Recreation Plan* there have been additions and modifications to the laws governing the use of wetlands in the state (most recently new regulations under the Wetlands Protection Act, General Laws Chapter 131, Section 40). The resulting changes have increased the control over wetlands and have lessened the possibilities for abuse. While the wetland laws and regulations are beneficial, they do not and cannot completely stop the filling and dredging of wetlands. Due to local and state decisions, many irreplaceable wetland acres are filled each year. To insure that valuable wetland areas are preserved, the MAPC recommends that local authorities adopt wetland zoning amendments and/or attempt to secure conservation restrictions on all inland wetlands.

Policies

- **Wetland Zoning**

Coordinated efforts by conservation commissions and planning boards should be initiated on a formal basis in every community to develop local wetland policies. The major goal of these efforts should be strict wetland zoning amendments for each community. region where they would apply.

- **Filling and Dredging**

The filling and/or dredging of any wetland should not be allowed unless it can be determined by all levels of government that the action is necessary for the public's health, safety and welfare.

- **Development**

Alteration to wetlands should be designed and monitored to insure that it will not have adverse ecological impacts

on the inland wetland in question. This policy includes the monitoring of run-off and pesticide damage.

Program

- The state, in cooperation with local communities, should greatly expand its program of inland wetland restrictions provided for in Chapter 131 Section 40 of the Massachusetts General Laws. This law allows the state to restrict the use of wetlands it deems necessary for flood control and water supply. To expand this program will require additional funding since, to correctly implement the law, the wetlands must be carefully analyzed and located; present staffing is not sufficient for a large-scale implementation of this law.
- Conservancy districts, wetland zoning and floodplain zoning amendments should be developed by every community in the region. These ordinances should restrict the use of wetland areas so that the natural characteristics and flood prevention benefits of wetlands will not be seriously compromised.

To insure uniformity of regulations and restrictions, it is recommended that local communities work with the appropriate watershed association or regional planning agency to develop or refine these laws. To insure regional consistency it is recommended that the watershed associations and regional planning associations seek assistance from the appropriate state agencies. Also, it is strongly recommended that all communities join the National Flood Insurance Program.

- Wetlands interpretive programs on state and locally owned property should be developed to provide for public recreation and demonstrate access and use possibilities for local communities. Boardwalks, interpretive signs, nature trails, and observation posts are examples of facilities that should be provided. The Massachusetts Audubon Society has done much valuable work in this field and should be consulted by local

and state agencies undertaking similar programs. These programs are not necessarily costly, but they illustrate the great value of wetlands and their recreation potential. Areas of priority for this type of program in the MAPC region should be: Marshfield marshes, headwaters of the Ipswich River, portions of the North River in Pembroke and Hanover, Cedar Swamp in Reading, Great Meadow in Lexington and Wolf Swamp in Boxborough.

RESERVATIONS



In the 1969 MAPC *Open Space and Recreation Plan and Program for Metropolitan Boston*, the Council recommended the acquisition of new reservations in six relatively undeveloped wedges radiating from the core of the metropolitan area. The proposed reservations were to give order and form to urban growth and provide the acreage necessary to meet the conservation and recreation needs of the region.

This report reiterates some of the proposals contained in the 1969 plan pertaining to reservations, but it does not propose a structured open space plan.

It is the intention of this report to discuss existing or potential reservation sites wherever they may exist in the region. The sites selected for discussion were chosen in accordance with the guidelines discussed in the first chapter of this report.

The recommendations in the following chapter will provide order and form to urban development by protecting those areas best suited for conservation and recreation purposes from urban development. The recommendations will also provide the acreage necessary to meet the conservation and recreation needs of the region.

Similar to other chapters in this report, the format of the chapter will include a brief introduction outlining the problems facing the region in relation to reservations, followed by policies and programs.

Background

Reservations are large areas set aside for conservation and recreation purposes.¹⁵ This concept was first set forth in the early planning of the Metropolitan Park System. Their original purpose was to:

1. preserve areas of distinctive topography or with special ecological features.

2. provide large breaks in the urban development pattern; and

3. offer a wide range of recreation opportunities in primarily natural areas. To some extent, the larger metropolitan parks acquired by the original Metropolitan Park Commission before the turn of this century (Blue Hills, Middlesex Fells, Stoney Brook, etc.) still fulfill this function. The availability of the car and the great highway building programs of the 1950s and 1960s have resulted in the rapid spread of housing, commerce and industry throughout the

15. For the purpose of this report reservations are areas of at least 250 acres.



metropolitan area. What was once fringe area is now established suburban development. New reservations are needed to provide breaks in the existing development pattern, thus giving form and guidance to urban development. New reservations are also needed to provide necessary open space and recreation opportunities, and protect ecologically unique and/or sensitive areas of the region.

Since 1969, there has been progress in acquiring new reservations, for example Wampanoag State Park and the Farnum Smith Property in Carlisle. As commendable as this effort has been, there is still a need for an active acquisition/restriction program for the protection of large open space and recreation areas. As stated earlier, outside the heavily urbanized core communities the plan should strive to anticipate future needs and provide guidance so that opportunities for new reservations will not be neglected.

This plan recommends the preservation and protection of existing reservations, but stresses the necessity of acquisition/restriction programs as the only long-term solution to our open space needs.

Policies

The following policy guidelines are intended to apply to all government agencies and private organizations involved in the preservation and expansion of reservations.

- **Large Areas**

The areas considered for reservations, except in heavily urbanized areas, should be large enough to completely insulate users from sights, scenes and sounds of development, and guarantee a predominately natural character. In some instances, these areas should be used for active and passive recreation pursuits, but in cases where the area in question is environmentally sensitive, such as a water supply area, wildlife refuge or wetland, recreation use should be limited or not allowed.

- **Acquisition**

Acquisition should be the primary method used to insure the creation of an adequate reservation serving the whole

metropolitan area. Acquisition should be accomplished with the aid of state and federal financial assistance, and through gifts of generous donors.

- **Natural Features**

The reservation system should incorporate examples of distinctive natural features of the region's topography and cover, i.e., hills, ridges, stands of trees, rock outcroppings, wetlands, streams and water bodies.

- **Diversity**

When possible, reservations should be acquired that provide a diversity of topographic and other natural features so that the entire reservation system will provide a variety of recreational experiences.

- **Capacity for Use**

The designed capacity of a reservation for active and passive recreation should be consistent with the ability of the area to withstand use without significantly altering its natural characteristics.

- **Activities**

Reservations should provide a range of those recreational activities that are not usually available in the urban and suburban parks and open spaces, such as horseback riding, hiking, picnicking and contemplative areas.

- **Intensity of Use**

Reservations should be developed to accommodate varying intensities of use. Selected areas on the periphery of the reservations (and not in the center) should be designed to serve large numbers of people involved in active or intensive use recreation to insure that the total impact of the reservation remains distinctly rural or natural.

- **Access**

Access to reservations should be limited to controlled points from the major road system. Public transportation, particularly buses, should be provided whenever possible and consideration should be given to seasonal service to particularly active and popular centers. Foot and bicycle paths must be encour-

aged as part of the linear elements in the reservation system since they can provide alternate modes of access to nearby and moderately distanced points of interest.

- **Local Impact**

The environmental, social, economic and traffic impact due to the creation of a reservation should be analyzed before the opening of a new reservation. Also, action necessary to alleviate any legitimate local problem, such as traffic flow and parking, should be completed before the reservation is opened for public use.

Program

During the past five years there have been many improvements in state parks and MDC reservations which comprise the greater part of the reservation system of Metropolitan Boston. For the most part, these improvements have been in the form of maintenance and modernization of existing facilities: specifically, relandscaping, new picnic tables, and new or improved trails.

New acquisitions have also been a part of the recent history of the area's reservation system. The more notable acquisitions include the Boston Harbor Islands, Wampatuck State



MAJOR RESERVATIONS Proposal Locations



Park in Hingham, Cohasset, and Norwell, the Farnum Smith property in Carlisle, Borderland State Park in Sharon and Easton, and the Fiske Hall property in Framingham. These areas were large acquisitions that are designated to serve as new reservations.

While the MAPC strongly supports all efforts to maintain and improve reservations, we believe there should be a new emphasis on more acquisitions. Considering the development trends of our region, and the poor record of the older core communities in protecting lands with

recreational potential, it is recommended that early and cooperative programs for the protection and acquisition of large blocks of land be stressed as the major element of the reservation program.

The program that follows is not exhaustive; its intention is to highlight the major elements of the MAPC open space proposals and provide examples of how the region can improve its existing reservation system. The proposals reflect the realities of development pressures in the MAPC region and indicate those areas that must be rehabilitated and/or protected if urban development is to be confined in those areas where it is most suitable.

Generally the order of the areas discussed moves north from Boston to Gloucester, then counter clockwise to the South Shore.

(27) Middlesex Fells Reservation – Melrose, Medford, Winchester, Stoneham

The Middlesex Fells Reservation was acquired by the Metropolitan Parks District in the late 19th century by consolidation and extension of water supply lands. It was one of the first reservations in the state. Now under the jurisdiction of the Metropolitan District Commission it presently provides a variety of recreational opportunities ranging from the recently modernized and expanded Stoneham Zoo to walking paths and picnic areas.

Although the Middlesex Fells Reservation is one of the largest public recreation areas in the Commonwealth (3270 acres of woodland and water), it does not provide open space and recreation opportunities commensurate with its size and ecological character.

There are two conditions that significantly contribute to the present problems of the reservation. First, the reservation is comprised by the many roads passing through it and linking the surrounding towns. Interior traffic circulation is presently excessive and interferes with walking and equestrian trails. Also, Interstate 93 divides the reservation into two distinct sections. It is recommended that a series of pedestrian and equestrian overpasses be constructed spanning the major roads (including I-93) that now divide the reservation into sections. Overpasses will unite the land area of the reservation and allow for more interesting walking and equestrian



trails and, in general, better utilize the reservation's size and potential.

Poor maintenance is the second major problem facing the Middlesex Fells Reservation. This problem was discussed in the 1969 MAPC *Open Space and Recreation Plan*, but must be reiterated because of inaction. Much of the reservation is heavily littered and many facilities for sitting or picnicking are in poor repair. General restoration and effective maintenance programs are strongly recommended over a piecemeal or spot restoration program. Also, the boundaries of the reservation should be clearly defined as part of any general restoration program. Presently, many of the fringe areas of the reservation are in disrepair and there is uncertainty of where the reservation begins or ends.

The reservation has 650 acres of water and 30 miles of shoreline. In general, these fresh water resources serve as reservoirs in the MDC system and are fenced off to prevent public use. It is recommended that if and when the MDC system requires complete water treatment facilities, the ponds within the Middlesex Fells should be studied for potential recreation use.

The Metropolitan District Commission should focus its efforts on the rehabilitation and improved use of the Middlesex Fells Reservation. In this manner, the reservation will be able to provide recreational benefits commensurate with its size and potential.

(28) Lynn Woods Reservation—Lynn

The Lynn Woods is owned and operated by the City of Lynn. The site is approximately 1400 acres of mostly rolling wooded hills. Included in the site are two substantial ponds: Breeds Pond and Walden Pond.

Accessibility to the reservation by Routes 95 and 107 is good and the location of the site is such that it can be easily utilized by core area residents. For all of its accessibility, Lynn Woods, like the Middlesex Fells Reservation, is not used to its full potential for open space and recreation.

Problems facing Lynn Woods include:

1. A poor pedestrian circulation system within the park. At present, the major trails are overgrown and poorly if at all marked. The state of the interior circulation system discourages many people from using Lynn Woods.
2. The lack of organized parking facilities on the periphery of the reservation. As a result, many people "create" their own parking space, resulting in a deterioration of roadside vegetation and the general impression of a non-maintained facility.
3. An insufficient amount of well-located recreation facilities, such as picnic tables, walking paths and active recreation areas. Without the suitable organization of the above mentioned facilities many people, especially families, cannot easily use Lynn Woods.

In general, the Lynn Woods needs to be redesigned to allow for public use. A plan must be developed by the City of Lynn to insure the proper use of this area. It is recommended that the city actively seek federal financial assistance for the rehabilitation of Lynn Woods.

Presently, the two ponds within the reservation are fresh water resources that cannot be used for public recreation. Any plan developed to enhance the value of Lynn Woods as a recreation area should be cognizant of the necessity to protect these ponds for fresh water drinking supply.

The Lynn Woods are one of the most attractive natural sites on the North Shore but has been poorly maintained and under used. Recently, its recreational value has become

increasingly apparent and plans are being made to improve the reservation. The MAPC hopes this spirit of renewal will continue at the city level and will result in a Lynn Woods that is well patronized and maintained. If, however, Lynn is unable to improve and maintain this facility, it is recommended that the state consider administering the area as a Metropolitan District Commission reservation. Further deterioration or diversion of land should not be allowed to occur.

(29) Breakheart Reservation—Wakefield, Saugus

Breakheart Reservation contains approximately 600 acres of wooded land easily reached from Boston by Route 1. It is controlled and maintained by the Metropolitan District Commission.

The reservation is an extremely popular location for hiking, bicycling, picnicking and swimming. This popularity has caused overcrowding and has led to traffic and safety problems. It is anticipated that with an extensive rehabilitation program, the Lynn Woods can divert some of the demand now absorbed by Breakheart during peak summer months.

The present maintenance program is sufficient, although more selective cutting and forestry management programs should be initiated.

The largest problem facing Breakheart Reservation in recent years has been pressure to divert some of its land to other uses. The recent construction of a vocational school in the reservation is symptomatic of the pressure for diversion. In order to continue functioning as a multi-



purpose recreational facility serving the Route 1 corridor, it is essential that Breakheart Reservation remain intact. *The MAPC recommends that the facility be expanded, and supports the proposals by the MDC to acquire an adjacent 9-hole golf course as an extension of Breakheart Reservation.*

The MAPC reiterates its 1969 proposals and recommends that the MDC should not under any circumstances support a reduction in the size of the reservation by the legislature, but in fact, should strive to expand its total acreage.

(30) Salem Highlands—Salem

In the 1969 MAPC *Open Space and Recreation Plan*, a reservation was proposed for an area known as Salem Highlands. The proposed reservation was approximately 1700 acres of woods and rocky ledge with a linear connector to Salem Harbor to the northeast.

While the proposal was valid and feasible in the context of 1969 and was supported by the City of Salem, it is no longer feasible at the scale originally recommended due to development that has occurred in this area during the past six years. The proposal of a Salem Highlands Reservation is still valid but on a smaller scale.

There are open areas abutting the existing public parkland that should be brought under public control. Any acquisition that does occur should be the responsibility of local agencies. Also, rehabilitation of some existing public areas within the boundary of the former proposal is necessary; for example, the wetlands adjacent to

the existing municipal golf course. At one time, this area had walking trails and viewing areas; today the trails are overgrown and the public areas vandalized. While restoration of the existing public areas within the Salem Highland site will not make the area a major reservation, it will result in a significant net increase in recreation acreage for Salem and surrounding towns.

The sections of the Salem Highlands area that can be used for open space and recreation purposes have been significantly reduced since the original proposal was made in 1969, but a smaller and more locally oriented facility should be developed by local authorities with the use of state and federal financial assistance.

(31) Mt. Pleasant (Brooksby Farm)—Peabody

Mount Pleasant, located in Peabody, is easily accessible by Routes 114 and 1. Recently, the City of Peabody applied for federal assistance in acquiring a 200-acre site in this area for active recreation purposes. The council has endorsed this proposal and hopes for action at an early date.

The MAPC recommends that the park also provide passive recreation opportunities. The proposed reservation, as shown in this report, would have a varied topography and protect one of the larger wetlands in Peabody. It could be used for a variety of outdoor recreation activities.

The Council endorses the present efforts of Peabody, but recommends additional acquisition in the Brooksby Farm area to provide passive recreation opportunities and protect what is the largest, most varied and most attractive open area in Peabody. State and federal financial assistance should be used for the expansion of the original proposal.

(32) Beverly Rocks—Beverly

Except for a few small holdings of the Beverly Conservation Commission, the area known as Beverly Rocks is privately owned. It is located in the eastern portion of Beverly, roughly bounded by Route 128 to the north and Route 127 to the south. In the 1969 MAPC *Open Space and Recreation Plan*, it was designated as an area that should be set aside for open space purposes. There is, however, development scattered



throughout the site and the potential exists for more residential development in the future. While there are some public holdings in this area, it would be difficult to design a reservation of any coherent shape and form.

Considering the natural beauty of the area, the MAPC supports Beverly's current policy of working with developers and other interested groups to insure that new development will not completely change the character of the area. The MAPC supports the Beverly Conservation Commissions' proposed acquisitions in this area, especially those areas with outstanding natural beauty. Conservation restrictions also should be sought by the conservation commission to preserve scenic areas that cannot be acquired.

Beverly Rocks should be developed as a low density residential area with the more scenic areas set aside for public purposes.

(33) Willowdale State Forest/Bradley Palmer State Park—Ipswich, Rowley, Topsfield, Georgetown

Willowdale State Forest and Bradley Palmer State Park were important segments of the Bay Circuit Plan, forming major portions of its northern greenbelt system. Today, both areas are popular recreation centers, operated by the state.

The lands adjacent to both parks are magnificent examples of traditional New England farm and estate landscape. In most instances, these lands have been preserved through responsible private ownership, but the extent to which this landscape can be preserved in the future is doubtful. The MAPC recommends that the abutting farmland to the south in the direction of

Turner Hill be acquired by the state and utilized for public park purposes.

The state and the Ipswich River Watershed Commission are currently considering the construction of a major reservoir near the eastern border of Willowdale State Forest (reservoir 30B). While eventual completion of the reservoir will reduce the amount of total usable public open space in Willowdale State Forest, it will not significantly reduce its recreation and conservation value. Also, considering that the final design of the reservoir is not yet fully determined, it is probable that the land acquisition necessary for the reservoir may actually increase the total of publicly usable open space in this area. It is recommended that the public acquisition necessary to create reservoir 30B also include as much as possible of Turkey Hill, Bush Hill and Scott Hill in Ipswich. In this manner, the creation of reservoir 30B will also serve to protect some of the more significant topographic features in the immediate area.

The Ipswich River is a great natural resource. In this section, it flows through Bradley Palmer State Park into privately held land. Sections of the river bank outside the state park are protected by conservation restrictions. It is recommended that the riverfront and adjoining wetlands be protected by cooperative action of private and public agencies particularly between the present Bradley Palmer State Park and the Wenham Swamp properties of the Massachusetts Audubon Society.

(34) Middlesex Canal—Merrimack River at Chelmsford to Charlestown

The Middlesex Canal operated in Eastern Massachusetts from 1793 to 1853 and was one of the first and most heavily used canals in the United States. In 1967, with the support of the Middlesex Canal Association, the canal was designated as a National Historic Civil Engineering Landmark by the American Society of Civil Engineers. It is also included in the National Register of Historic Places.

Today, the remains of this engineering wonder are in dire peril of extinction. Along its former route large portions of the canal have been filled. The MAPC does not recommend a reopening of the canal but rather, the preserva-





tion of what remains. The Middlesex Canal has great potential as one of the longest linear parks in the entire nation. Through the use of limited acquisitions by local conservation commissions, conservation restrictions and protection of the remaining areas, the canal can become a valuable scenic pedestrian and bicycle trail.

Presently, there are two areas of the canal in imminent danger. In Chelmsford, one-half mile of the canal cuts across the Mt. Pleasant Golf Course. Nothing should be allowed to intrude here. This will assure the present public use of the canal banks in this area. Also, the pier of the canal aqueduct in the Shawsheen River (which is the most significant remaining structure of the canal) is threatened with demolition to make way for proposed sewer construction. The MAPC recommends that any construction near the historic aqueduct be required to preserve the remains of the pier.

The Massachusetts Historical Commission, the Middlesex Canal Association, the Executive Office of Environmental Affairs and the MAPC should develop a plan to preserve the Middlesex Canal with the cooperation of local towns. Considering the great pressures to obliterate the remains of this engineering triumph, *the MAPC recommends special legislation be adopted in the near future to fund the acquisition of the more important, and not yet protected, areas of the Canal.* In this manner, the region will have preserved for its use, not only an historic landmark, but a highly useable linear park.

(35) Mt. Ann Reservation and Ravenswood Park—Gloucester

Mt. Ann Park, given to the Trustees of Reservations by the Minot Family in 1897 is located just off Route 128 in Gloucester. The park, from its highest point, has an excellent view of Cape Ann and Gloucester, and on clear days, parts of Maine and the south shore of Massachusetts also can be seen.

The total number of people who can use the reservation is limited due to the very small parking lot located just off Route 128, although it is possible to enter the reservation on foot. Presently, Mt. Ann is available for scenic viewing, hiking and picnicking.

Ravenswood Park is east of Mt. Ann Park and is operated by the Town of Gloucester. The park is of sufficient size to provide the user with a feeling for the landscape and vegetation indigenous to Cape Ann. It also has high ground which provides views of Gloucester Harbor.

The land between the two parks is rolling and forested. It contains four city reservoirs (Dykes Pond, Lily Pond, Wallace Pond and Haskell Pond), thus some of the land between the two parks is already owned by the City of Gloucester to protect its water supplies. Considering the relatively small amount of publicly accessible open space on the Cape Ann Peninsula and the great attraction of this area in summer months, it is recommended that a major new reservation be created by linking Mt. Ann Reservation to Ravenswood Park. The final design of the proposed reservation must insure the protection of Gloucester's water supply. Given that many watershed areas are used for

recreation purposes such as the Lynn Woods and the Middlesex Fells Reservation, the problem of administering a joint water supply and open space and recreation area should not hinder the creation of the proposed reservation. The new reservation could provide some of the most interesting and challenging hiking and riding trails in the region. Also, picnicking and camping facilities could be easily developed making the area available for a variety of recreation uses.

Further, it is proposed that Walker Creek, which is located to the west of Route 128 and drains Haskell Pond, be protected. The City of Gloucester, through the use of conservation restrictions and the acquisition of easements, could create a linear park along Walker Creek which would unite the interior portions of Cape Ann to the ocean via Domry Island and Essex Bay.

In addition, a cooperative effort among private owners (Trustees of Reservations), Gloucester, Essex and Manchester should be established to link the Haskell Pond drainage area to Agassiz Rock (Manchester) and Ebben Creek (Essex). This also would provide a continuous belt of open space from the interior to the ocean via Essex Bay.

The proposals for linear parks along Walker Creek and Ebben Creek would be in addition to the proposed consolidation of Mt. Ann Reservation, Ravenswood Park and the City of Gloucester watershed properties. Taken together these proposals would protect many of the significant natural and ecological features in the Cape Ann area, and would provide the region with a wide variety of open space and recreation opportunities.

Considering the scope of this recommendation and the different agencies involved, it is recommended that the Executive Office of Environmental Affairs develop a cooperative program with the Trustees of Reservations and the City of Gloucester for the protection of this area and consolidation of holdings by these different agencies with regional, state and federal financial assistance.

The new reservation should be designed and administered as a unit through cooperative agreements among all the owners involved, including private organizations such as the

Trustees of Reservations. And, as a matter of policy, Essex, and other communities in the area should be included in discussions and decisions concerning access routes, traffic circulation patterns and the overall capacity of the proposed reservation.

(36) Harold Parker State Forest—North Andover, Andover, North Reading, Middleton

Harold Parker State Forest is a large recreation and conservation facility administered and maintained by the Department of Environmental Management. There is reasonable access to the site via Routes 114, 125 and I-93. As a result, the various recreational opportunities offered are well used by the residents of metropolitan Boston.

The area surrounding the facility for the most part is still open and undeveloped; and some of the land immediately to the south of the existing state forest is sensitive wetland associated with the Ipswich River.

To prevent further development in these sensitive areas and to protect the Ipswich River, *The MAPC reiterates its 1969 recommendation to extend Harold Parker State Forest (in accordance with local open space plans) in a southerly direction, to include Mill Meadow and Strawberry Meadow in North Reading.* The acquisition, which should be the responsibility of the EOEA, will provide the public with control over a sensitive and ecologically important segment of the Ipswich River Watershed.

Further, *the MAPC recommends acquisition in a northerly direction to unify many small and isolated parts of the state forest.* This would allow for an uncomplicated circulation system throughout the state forest and prevent unwanted or unassociated development from occurring between the separated parcels of the existing state forest. It is anticipated that acquisitions north of the main body of the state forest could be used for a variety of recreation purposes. The Mill and Strawberry Meadow area should be utilized for passive recreation, conservation and wildlife purposes only.

The extension of the state forest will provide a large (approximately 7,000 acres) wedge of open space between the heavily

traveled Route 3 and Route 95 transportation corridors. This wedge will provide some form to future urban development to the north of Boston, particularly in this area which is expected to exhibit a rapid population increase.

The MAPC's recommendations for extension are motivated by concern for the adjacent wetland areas that play a significant role in the quality of the Ipswich River, and for increased recreation opportunities that are derived from a unified state forest.

(37) Wilmington/Burlington Wetlands—Wilmington, Burlington

In the 1969 MAPC *Open Space and Recreation Plan* a reservation of approximately 3,000 acres was recommended for the Wilmington marsh areas at the headwaters of the Ipswich River and uplands in Burlington. It was intended that the new reservation be a multi-purpose area, with two or three impoundment reservoirs as proposed in reports by the Soil Conservation Service and the Massachusetts Department of Water Resources. It was also intended that the new park serve as a major open space focus for new growth in this rapidly developing area.

The 1969 proposal incorporated projects from the "General Plan for Wilmington" which recommended two large impoundment reservoirs and a wildlife refuge overlapping into Burlington and public ownership and/or regulations of all wetlands at the headwaters of the Ipswich River. In pursuance of that plan, the town has acquired additions to its well fields and adopted floodplain zoning to protect all its wetlands. In Burlington, a water supply reservoir has been constructed at the Woburn-Wilmington Line.

Unfortunately, in Burlington commercial and residential development has continued on the uplands recommended for inclusion in the reservation proposed in 1969. Instead of a multi-purpose open space and recreation area as proposed in the 1969 report, *the MAPC now recommends renewed efforts to protect and conserve the wetlands at the headwaters of the Ipswich River in Wilmington and Burlington with appropriate "natural storage" of flood waters, impoundment reservoirs for water supply, conservancy district zoning and/or State Inland*

Wetland Restrictions, and public ownership of wetlands. Encroachment on these wetlands, for whatever reason, must be prevented.

Wilmington has adopted floodplain zoning as part of its town zoning by-law. It is recommended that these by-laws be strictly enforced. Also, it is recommended that Burlington consider adoption of similar amendments to its zoning regulations, such as conservancy district zoning as proposed in its 1970 master plan. Through strict local regulation the headwaters of the Ipswich River can be protected. The resulting area will be a large inter-connected series of protected wetlands that will serve as a deterrent to development in this sensitive area.

(38) New Town Hill—Littleton

Littleton is basically a rural-suburban town with great potential for rapid growth in the next decade (approximately a 50 percent increase is currently projected). The town is considering how to accommodate this growth and what areas should be set aside for open space and recreation purposes.

Littleton, with federal assistance, recently acquired Oak Hill, a 200+ acre area in the western portion of the town. While this area can provide active and passive recreation opportunities, it does not include some of the more potentially valuable open space areas as defined in the town's 1964 master plan and the MAPC landscape analysis. These areas include: New Town Hill, the linkages between Long Pond and Fort Pond, and the twin hills called Long Pond Brothers.

Considering the projected growth rate of Littleton (which will increase recreation demands) and the excellent access to the New Town Hill and the Long and Fort Pond areas via Routes 2 and I-495, *the MAPC recommends that portions of New Town Hill and areas adjacent to the two ponds be acquired by public agencies for open space and recreation purposes.* State and federal aid should be used to help defray the total cost of acquisition. If properly designed, the upland areas overlooking Fort and Long Ponds can become an easily accessible year around open space and recreation area. Considering the location of the site and its value as a residential area, it is recommended that acquisition occur within the next ten years.

If acquired, some of the most valuable recreation areas in the northwest part of the region will be preserved for public benefit.

(39) Marble Hill—Stow

Marble Hill, a drumlin formation, is located in the Town of Stow. Like many of the western communities in the MAPC region, Stow is sparsely populated and has large sections of undeveloped and agricultural land. While there is an abundance of open space, relatively few areas are publicly owned and used for public recreation. Given population projections which indicate rapid suburbanization, immediate action should be taken to protect some of the more desirable and functional open areas.

Marble Hill is one of the more scenic areas in Stow. From its summit, there are many pleasant views of the surrounding rural countryside. The topography of the Marble Hill area also easily lends itself to other forms of passive recreation opportunities. The site is relatively close to the town center, which allows for the possibility of non-automobile modes of access to the area and, in general, the area is easily accessible to residents of the region from I-495 and Route 117.

The Town of Stow has recently applied for federal financial assistance to purchase this area for recreation and conservation purposes (approximately 250 acres). This effort is strongly supported by the MAPC.

Marble Hill, its acquisition and maintenance by the Town of Stow, is an important step in the process of providing public open space in the western portion of the MAPC region. In order for this project to be united with the other facilities in the proposed reservation system, it should be extended north and south along wetlands and streams. This proposed extension would not only protect large wetland areas and provide a continuous public open space corridor in Stow, but it would provide an essential link to other existing and proposed public open spaces in the region (such as the Assabet River) and make the project truly regional in nature. As with the acquisition of Marble Hill, the responsibility of acquiring or restricting the use of the adjacent wetlands belongs with the Town of Stow.

(40) Tophet Swamp (Farnum Smith Property) —Carlisle

The state has recently acquired over 900 acres in northern Carlisle known as Tophet Swamp. While the upland portions will be used for hiking, picnicking and possible swimming, most of the area is wetland that will be used for conservation and wildlife purposes.

Presently, there is an operating farm on the site. Through an agreement between the owner and the state, the owner of the farm will be allowed to keep his farm active for three to five years. After the owner vacates the farm, the state is presently planning to keep the farm active by a lease arrangement or the management of the farm by outside interests. The purpose of the farm will be to preserve the traditional New England agricultural landscape of this area, and to provide an educational experience for urban residents.

While the total area is over 900 acres, only 180 will be used for recreation purposes. Nonetheless, the new state park will provide a relatively unique attraction and add a new dimension to the recreation opportunities available in the region. It will also preserve one of the major wetland areas in the region.



(41) Minute Man National Park —Lexington, Lincoln, Concord

Minute Man National Park is operated by the National Park Service. The park is approximately 750 acres, the largest portion of 458 acres in Lincoln. It has a linear configuration since it parallels both sides of Route 2A and historic Route 2 (Battle Road of April 19, 1775). The most famous portion of Minuteman National Park is in Concord at the scene of the battle at the *Rude Bridge which arched the flood*. Within the boundary of the park are some of the most historic structures and locations associated with American history. Closely associated with the park are the historical sites of Lexington and Concord which are locally controlled and maintained.

Congress, when it passed legislation establishing the park, set a size limit of 750 acres. *The MAPC recommends that this limit be revised to allow the National Park to acquire the adjacent wetlands in Lincoln, Lexington and Concord* which are essential to the overall image of the park. Development in the adjacent wetlands or destruction of neighboring historic structures could seriously erode the quality of the park. Also, the development of the wetlands could



have serious adverse environmental impacts on the existing park property. The Town of Lincoln has moved to protect many of the wetlands in question under its jurisdiction, but considering that the park is located in three towns, it is recommended that action be taken by the National Park Service and Congress. Local towns should not be required to protect a federal park, although some have done so.

(42) Cambridge Reservoir—Waltham, Lexington, Lincoln and Weston

The Cambridge Reservoir and lands around it are owned and operated by the City of Cambridge for domestic water supply purposes. The area also functions as a de facto wildlife refuge. Much of the watershed lies outside the 570-acre Cambridge ownership, although it is fortunately still largely open land. This is unique when the scarcity of large tracts of wooded land so close to the densely settled urban areas of Metropolitan Boston is considered. Because of easy access to the site, its topographic features, and partial public ownership (City of Cambridge), the MAPC considers the watershed area as a potential multi-use recreation area. At the same time the MAPC does not minimize the value of this reservoir as a fresh water supply for over 100,000

people. Therefore, before any recreation use is planned or allowed, it must be shown that there will be no adverse effect on water quantity or quality. The management and control of such land adjacent to a reservoir present unique and difficult problems. The maintenance of a crucial water supply in a water-short metropolitan area must remain the prime concern in any planning for the reservoir area.

The MAPC recommends recreation use of the lands surrounding the Cambridge Reservoir excluding water contact activities and the use of any wetlands and/or dry lands that are an integral part of the wildlife refuge, that would have any adverse impact on water quality or quantity.

Since this site is owned by Cambridge and used by Cambridge for water supply, Cambridge should not be required to suffer any loss of water quantity or quality, or pay any amount to develop a recreation facility on land it owns, since residents in other towns will receive the most benefit. It is recommended that the adjacent towns be prepared to fund any expenditures which come from agreements by Cambridge to permit any recreational facilities on Cambridge-owned land within the proposed Cambridge Reservoir-Hobbs Brook Recreation Area.



The final solution is the acquisition and control of the area by the Metropolitan District Commission. The MDC should acquire the Cambridge Reservoir and additional areas in the watershed to finally establish the Western Reservation recommended in the original proposal for a Metropolitan Park System (1893).

With the expansion of public holdings around the Cambridge Reservoir, and the proposed expansion of Minuteman National Park as discussed earlier, the Cambridge Reservoir will be strengthened as a major open space link between Minuteman National Park to the north and the Charles River and Cutler Park to the south.

(43) Nobscot Hill/Tipling Rocks – Sudbury, Framingham

The Nobscot Hill/Tipling Rocks area in Sudbury and Framingham is approximately 1,500 acres (including an existing Boy Scout Camp) of rolling wooded land. In the 1969 MAPC *Open Space and Recreation Plan*, a significantly larger area was proposed for reservation purposes. While commercial and residential development has now diverted much of the land originally recommended for acquisition, there has been considerable acquisition for public purposes in recent years. Most of the new acquisitions have been inspired by the conservation commissions of Sudbury and Framingham in accordance with local open space and recreation plans.

It is recommended that local authorities continue their acquisition programs with the use of federal and state aid until as much as possible of the remaining open space in this area is brought under public control. Each town should acquire that portion of the proposed reservation within its respective boundary. The reservation should be designed and administered as a joint effort between Framingham and Sudbury.

The new reservation will have excellent access from the Massachusetts Turnpike and Route 9 and will serve the western suburbs of Boston and the urban core communities. It should be developed for public camping, group outings, and picnicking. Nobscot Hill is quite steep and possibly suitable for skiing and coasting activities as well as for the location of an observation tower.

In the protection of this area and the eventual creation of a reservation, there is a unique opportunity to join both open space and historic points of interest. The nearby Wayside Inn and Old Grist Mill as well as local historic sites derive much of their quality from their country surroundings. Walking trails and scenic drives should be designated connecting the regional park with adjacent historic sites.

(44) Sudbury Reservoir—Southborough

The Sudbury Reservoir in Southborough is controlled by the Metropolitan District Commission and used as a water supply facility. Consistent with Metropolitan District Commission policy, the area cannot be used for recreation purposes.

Considering the size of the MDC's holdings in this area (over 2,500 acres) and its location in the western portion of the region, where access to water recreation is more difficult than in other parts of the region, it is recommended that eventually the area be put to some form of recreation use.

As with any MAPC proposal, to use an existing reservoir for recreation purposes, the quality of the water supply must not be compromised. Therefore, unless the MDC water supply system becomes a fully treated system at some future date, the waters of the Sudbury Reservoir should not be used for water contact recreation. If the system does become a fully treated system, then the feasibility of water contact recreation should be studied by the MDC.

In the short term, the MDC should undertake studies to determine the level of recreation use that surrounding lands can absorb without adversely impacting the water quality of the reservoir. It is the opinion of the MAPC that some level of hiking, camping and picnicking can be developed in selected areas without limiting the water supply role of the facility.

With proper planning the Sudbury Reservoir could be used for limited recreation purposes now. Eventually, if water contact recreation proves feasible, the Sudbury Reservoir will become one of the largest and most exciting public open space/recreation areas in the metropolitan area.

(45) Five Hills/Wildcat Hill—Framingham, Ashland

In the 1969 MAPC *Open Space and Recreation Plan*, the 4,800 acre Five Hills area on the Ashland-Framingham border was proposed as one of the larger reservations in the MAPC area.

Field studies have indicated that much of the area previously proposed for open space has been diverted to non-recreation use. Considering recent developments in this area, the original 4,800 acre proposal is no longer feasible. The MAPC now recommends expanding the existing public recreation area around Wildcat Hill, which is presently a public recreation area operated by the Town of Ashland. The proposed expansion of approximately 300 acres will include some of the Five Hills that gave the original proposal its name. The new proposal will preserve some of the more scenic topographic elements of the original proposal and it will increase the usefulness of the existing public open space. Given the population projections for MAPC's western suburbs and the recreation demands these new residents are anticipated to generate, an expansion of the Wildcat Hill recreation area is warranted.



tributary system of Echo Lake. The southern extension could affectively provide a public greenbelt between the Sudbury and Charles Rivers.

The linear expansion of Hopkinton State Park will greatly enhance its recreation potential and provide a continuous greenbelt of open space for the residents of this area.

(47) Franklin, Wrentham and Foxborough State Forests—Franklin, Wrentham, Foxborough

These three state forests, located in the southwestern portion of the MAPC area, protect large tracts of wooded scenic areas for the public benefit. The MAPC concurs with the Department of Environmental Management (DEM) that these areas should not be developed primarily for recreation purposes. However, *the MAPC does recommend that the DEM study the feasibility of limited recreation use that will not necessarily alter their character as state forests.*

These areas provide an opportunity to increase the recreation supply in the southwestern portion of the region with little capital investment in acquisition. While these state forests should not be developed to the intensity of a state park, hiking and camping should be encouraged.

(48) Noon Hill—Medfield

Noon Hill and Medfield Meadows located in Medfield along the Charles River, was proposed as a reservation in the Bay Circuit Plan (1928-1956) and in the 1969 MAPC *Open Space and Recreation Plan*.

(46) Hopkinton State Park—Hopkinton

Hopkinton State Park is a well run multi-use recreation area that presently absorbs much of the recreation demand in the western suburbs of the MAPC area. Continued maintenance will ensure its value to the region as a recreation resource. *The MAPC, in keeping with its policy of a linked open space system, recommends linear expansion of the state park in such a manner that it will be physically united to other public open spaces in the region.*

To the north and east it is recommended that an easement along Indian Brook be acquired by the state. This would link the state park with the Sudbury River and increase the potential recreation value of the river and the state park.

To the south, the acquisition of easements along Indian Brook will unite existing isolated parcels of public open space, and allow for the proper planning and use of these areas. With the purchase of approximately 50 acres of upland, the watershed of Indian Brook could be linked with the watershed of the Charles River via the

Noon Hill is an outstanding topographic feature in this part of the metropolitan area and is used for winter skiing, sledding, tobogganing and other active recreation pursuits.

The town of Medfield recently applied for federal and state financial assistance to acquire more open space and recreation acreage in this area. If funded, the proposal would increase this area's public open space by 243 acres.

Considering that the topography of the site will allow for a variety of recreation opportunities and that the easy access to the area will encourage regional use, the Council strongly supports the proposals of the Town of Medfield, and the efforts of the Trustees of Reservations to preserve this area.

To complement the existing reservation and to further enhance the Charles River as a conservation and recreation area, the MAPC supports the Department of Environmental Management's present effort to use the former State Hospital in Medfield as public open space and recreation area, to be known as the Medfield Charles River Reservation. This action provides additional public acreage along the Charles as a major open space corridor in the region. Thus, with no acquisition costs, the state has greatly enhanced the open space and recreation value of this portion of the Charles River.

(49) Moose Hill—Sharon

The general area known as Moose Hill is presently used for public recreation purposes, although it is controlled by two private organizations. The Moose Hill area was proposed for inclusion in the Bay Circuit of Open Spaces in 1928 and recommended for open space use by the MAPC in 1969.

The Massachusetts Audubon Society controls approximately 250 acres in this area including part of Moose Hill and, although it is a private organization, it maintains parts of the Moose Hill for public benefit.

The area surrounding Moose Hill is controlled by the Moose Hill Trust. While the trust does not maintain its approximately 2,200-acre holding for public recreation, there is limited informal use of this land for hiking and other passive recreation purposes.

Given the natural beauty of this area and the ease and variety of access to it, the MAPC recommends preservation of the entire area for the public benefit. It is further recommended that while the Moose Hill area can be used for a great variety of recreation activities, motorized recreation vehicles should not be allowed, in order to provide the region with at least one large reservation where the natural sounds and sights are predominant.

The Moose Hill area will be a multi-purpose reservation and its accessibility by both car (I-95) and commuter rail will make it available for regional use.

The MAPC supports continued private control by the Audubon Society over part of this area. However, the appropriate state agencies, should acquire and maintain the Moose Hill Trust properties as a state park. An agreement with the Massachusetts Audubon Society should be established so that the entire area can be administered and designed as a unit.

(50) Lake Cochituate State Park—Natick, Wayland, Framingham

The Cochituate ponds, approximately 1,000 acres of land and water are operated as a state park by the Department of Environmental Management. The ponds are located in a densely developed area, and the evidence of development pressure can be seen in the fact that in many instances residential and commercial structures crowd very close to the lake shore.

The ponds are an extremely important recreational resource and provide an important link between the Bay Circuit Plan and the proposed MAPC regional open space plan. One



of the major problems confronting the state park is the limited amount of open land around the ponds due to intensive residential and commercial development in the area. To ameliorate this problem, the DEM has increased recreational use with expansion of the park through the development of a linear park system along the shores. This effort should be maintained and is strongly supported by the MAPC.

Where land can be acquired and added to the state park, it is recommended that this be done. Recently the park was expanded by the acquisition of federal property in the Pegan Cove area. Hopefully, this process will be repeated if more federal properties are declared surplus in this area.

While programs to change or expand the use of the pond shores for recreation purposes should be continually examined, there should be a new emphasis on linking the waters of the ponds to other potential water-oriented recreation areas in the region. The possibility of creating a water and portage connection between the ponds of Lake Cochituate and Charles River (via Indian Brook) and to the Sudbury River (via Meadow Brook) should be given serious consideration. This proposal would restore one of the major native Indian canoe routes in New England (the connection of the Sudbury and Charles Rivers) and provide the modern canoeist with a 9-mile trip from the Charles River, through the lakes and on to the Sudbury River.

Recently, a 5 mph speed limit was adopted for the north pond of the state park. This action may discourage the use of power boats in this area, and encourage the use of canoes. Considering the growing popularity of canoeing and the availability of part of Lake Cochituate State Park for canoeing, *the MAPC recommends that the state fully develop the potential for canoeing in the state park.* The MAPC supports a proposal put forth by the Lake Cochituate Watershed Association to develop the site of a marginally used MDC gatehouse on north pond as a canoe rental area. This action would provide the residents of Greater Boston with easily accessible canoeing opportunities.

To conclude, the state park is easily accessible by numerous major roads, thus it serves hundreds of thousand of annual visitors. All

indications point to continued pressures on the park. The land surrounding the park must be preserved, linked with other recreation areas and expanded where possible.



(51) Hale Reservation—Westwood, Dover

The Hale Reservation is a relatively undisturbed tract of land containing a variety of soils, vegetation and topography. Included within the reservation is a large man-made pond with numerous recreation uses and potential for more. The reservation is owned by a private corporation which makes the area available to citizens of Westwood and Dover. The reservation also sponsors a program that brings thousands of inner city youth out to the reservation for recreation purposes during the summer months. It is an excellent example of an area that serves the neighboring communities for open space and recreational purposes and also serves the region through day camp and group outing functions. The reservation abuts town owned property in Dover and is relatively close to other public lands. The Dover "Master Plan 1958" proposes a consolidation and expansion of public and semi-public holdings in this area. The MAPC supports that proposal and recommends that the interested parties explore methods to consolidate their activities and plans for their respective areas. In this manner, land for public use can be used more effectively.

The Hale Reservation plays a major role in the regional open space system and the existing private owners intend to continue their support for this facility. If, however, private support becomes difficult or impossible at some future

date, it is recommended that a public agency acquire the reservation to prevent it from being diverted into non-recreation use. In this manner, the important role now played by the Hale Reservation will be sustained.

(52) Rattlesnake Hill—Borderland State Park—Sharon and Easton

A proposal to develop Rattlesnake Hill for recreation purposes was contained in the 1969 MAPC *Regional Open Space Plan*. Primarily, the reservation was to serve the regional recreation needs of the Metropolitan Brockton area. It was determined that for this section of the region there was a lack of regional open space and that, if no new facilities were developed to absorb part of the anticipated demand, a growing population would exert harmful pressures on existing recreational areas.



Recently, the state acquired 1,300 acres in this area and formed Borderland State Park. The new park, operated by the Department of Environmental Management, will be used primarily for passive recreation purposes.

The MAPC recommends additional acquisition in this area with the intention of providing an area for active recreation.

While the present state holdings are important, MAPC surveys indicate that Rattlesnake Hill and its immediate environs are the most versatile and aesthetically pleasing in the area. Thus, it is recommended that the present state lands in this area be supplemented by the acquisition of Rattlesnake Hill and environs. At a minimum, the acquisition should include the summit of Rattlesnake Hill and land connecting it to the existing state park.

An enlarged Borderland State Park will be able to provide a wide variety of activities not feasible at present, such as scenic outlooks and a variety of winter sports.

While the MAPC supports the recent state action in this area, it recommends a further expansion which will result in protecting the most topographically significant feature in the area and provide the potential for more active recreation opportunities.

(53) Blue Hills Reservation—Milton, Quincy, Braintree, Randolph, Canton

The Blue Hills Reservation is comprised of over 6,000 acres of rolling woodlands in the communities of Canton, Milton, Randolph, Braintree and Quincy. It is the largest reservation under the jurisdiction of the MDC, and it is one of the most popular facilities for swimming, golfing, boating, picnicking, skiing, hiking, coasting and horseback riding in the metropolitan area.

With increasing suburbanization south of Route 128, the function of the Blue Hills as a recreation area and as an area giving form to development becomes more critical. It was previously recommended in the 1969 MAPC *Open Space and Recreation Plan* that the Metropolitan District Commission expand the Blue Hills Reservation by approximately 1,500 acres. It is recommended that most of the expansion be in an eastward direction toward Quincy to include the historic Bunker Hill Quarries. This plan strongly reiterates this proposal. The new acreage would not only add acreage to the reservation which would expand the facilities for the public good, but it would lessen the opportunity for encroachment along its present boundaries by undesirable development.

The potential for active and passive recreation use of the Blue Hills exceeds the oppor-



tunities available with the present level of facilities and management. The Ponkapoag Golf Course, Trailside Museum and the Houghton's/Hoosiwhisick Pond area are all extremely popular and well managed. However, they are rela-

tively small portions of the total reservation. Other areas should be developed for more use without destroying the character of the land. The MDC should develop and maintain new trails that use the linkage between the Blue Hills, Fowl Meadow and the public and proposed public lands along the Neponset River. In this manner, lengthy trails traversing a changing natural landscape could be provided, and linkages that now exist could be rehabilitated and more fully used.

With expanded land area and recreation facilities, and use of the natural linkages to other public open spaces, the Blue Hills could become one of the most versatile and important recrea-

tion areas, not only in the region but in the entire state. Physical expansion of the facility should be given top priority considering the potential pressures for development near the Quincy/Blue Hills border.

(54) Wompatuck State Park—Hingham, Cohasset, Norwell, Scituate

Wompatuck State Park is one of the more recent major state parks acquired by the Department of Natural Resources (now the Department of Environmental Management). Its 2,778 acres of woodland and brooks were acquired in 1968 when the U.S. Government declared the area surplus property. The park adjoins the Whitney/Thayer Woods Reservation of the Trustees of Reservations, which contains 795 acres in Cohasset and Hingham.

Studies for improved access to the area and to Nantasket from Route 128 and the illogical boundaries between these two open spaces have suggested the urgency of a cooperative effort by the State and the Trustees of Reservations to acquire additional areas and to work out appropriate agreements for management of adjoining holdings.

The area is critical to the regional open space plan because it is a significant natural area in close proximity to the densely settled urban core. The park can serve the core area as well as the southern suburbs. It may even prove feasible, in the summer months, to operate MBTA buses from the state park to Quincy Center or to the proposed South Quincy Transit Station. In this manner those core area residents without cars can avail themselves to the state park.



The Department of Environmental Management has recently developed picnic areas, camping sites and bicycle trails in certain portions of the park. Additional facilities, such as hiking trails, nature study areas, fishing, bridle trails, camping and swimming areas are presently under study or are being designed. It is recommended that the areas being planned be constructed as soon as possible and that the state park be designed to accommodate fairly intensive use.

(55) North River Reservation—Marshfield, Norwell, Scituate

A major park was proposed for this area in the 1969 MAPC *Open Space and Recreation Plan*. It was intended to preserve some open land along the rapidly developing South Shore coastline and deter the possibility of a continuous belt of development along the entire coast.



Acting on town and MAPC proposals, Marshfield has had an active implementation program during the past five years. As a result, Marshfield has acquired 789 acres of conservation/recreation land that was proposed in the 1969 MAPC *Open Space and Recreation Plan*.

Much of the area acquired (367 acres) is in the Furnace Brook Watershed which contains Carolina Hill. Carolina Hill according to MAPC surveys is one of the most prominent topographic features on the South Shore. The MAPC, therefore, supports all efforts of Marshfield to acquire as much of Carolina Hill as possible, and supports the town's 900-acre acquisition goal for the Furnace Brook Watershed as stated in its open space plan of 1972.

The North River is a handsome tidal valley with extensive salt marshes cutting inland at right angles to the radial growth in the Route 3 transportation corridor. The acquisition of Carolina Hill will complement the wetland areas of the North River and increase the recreation potential of the river.

In general, the MAPC supports the acquisition goals of the 1972 Marshfield Open Space Plan, and recommends the plan to other communities as a model of how wetlands and uplands can be unified into a town-owned greenbelt system.

(56) Charles to Charles Corridor—Boston, Brookline, Newton

In recent years the conservation commissions of Boston, Brookline, and Newton have been working to create a corridor of open space in the core area of the region, the Charles to Charles Corridor. The proposal would create an "open corridor extending through the Fens, along the Boston/Brookline line and through the Sawmill Brook marshes near the Boston/Newton line to the Middle Charles at Cow Island Pond. This open space corridor is in part the creation of Frederick Law Olmsted and includes an estate area not intensely developed as well as marshland not yet filled. It is the only remaining natural landscape in the heart of Metropolitan Boston.

"The Charles to Charles Corridor is a precious recreational resource. Outdoor recreation—hiking, bicycling and picnicking—can be

made available to many people close to their homes . . ."¹⁶

The conservation commissions involved have divided the project into three sections.

"The dominant element in the northern segment is Olmsted Park, which extends from the Charles River Basin to Jamaica Pond. The Olmsted design also links Boston Common to the Public Garden by Commonwealth Avenue to the Fens, up the Muddy River across Leverett and Ward's Ponds to Jamaica Pond. Progress is being made in the northern segment by a demonstration project underway by the Massachusetts Division of Water Pollution Control in cooperation with the MDC and the City of Boston. This project will increase water flow and water quality in the Fens.

"The middle segment principally consists of private estates and existing public green space: Jamaica Pond and Larz Anderson Park. A north-west-southwest axis crossing the corridor links Newton's Hammond Pond and Webster Estate Conservation lands with Brookline's Lost Pond, the Country Club, Putterham Meadows Golf Course and Larz Anderson Park to Boston's Arnold Arboretum and Franklin Park. Progress in the middle segment, threatened by development in its large privately owned parcels has come by two gifts of conserva-

16. Charles to Charles (Boston: Boston Conservation Commission, Brookline Conservation Commission, 1973) p. 1.



tion restrictions: these are a 4.6-acre restriction of Sargents Pond and its shores in Brookline and a 6-acre restriction adjacent to Jamaica Pond in Boston. The Boston Conservation Commission has also acquired a 5-acre wooded parcel adjacent to other city park land in the middle segment.

"The open space potential of the southern segment consists of Sawmill Brook marshes, privately owned wooded areas and cemetery lands, and the Brookline Wildlife Sanctuary (the D. Blakely Hoar Natural Area)."¹⁷

In the southern segment the Boston Conservation Commission has acquired an 8-acre parcel on the Charles River by transfer from the Boston Public Works Department. Also, acquisition by the MDC of the 175-acre historic Brook Farm, will be an important addition to the Charles to Charles proposal.

The middle segment of the corridor has been judged to have the most immediate importance. Obviously, this segment is vital to the eventual linking of the proposed corridor, but beyond this, the middle segment faces the greatest threat from intensive development. The conservation commissions of Boston and Brookline have singled out 13 properties in this segment for immediate acquisition or protection.

The MAPC urges the Executive Office of Environmental Affairs to support the efforts of Boston, Brookline and Newton and make available to them Self-Help Funds which can be used in the acquisition of the 13 properties.

(57) Belmont Greenbelt—Belmont

The Conservation Commission of Belmont has developed a proposal to protect various public and private open areas in the western portion of the town. The proposal would effectively preserve an existing open area, and provide for more public open space in a relatively densely settled portion of the metropolitan area.

Much of the area in question is publicly controlled; for example, the MDC Beaver Brook Reservation, Belmont Conservation Commission's Rock Meadow Preserve, Massachusetts Audubon's Highland Farms Preserve and Green-

ough Foundation Preserve. These areas are relatively contiguous, but to insure that the existing open areas remain open it is imperative that the State of Massachusetts and the state hospitals cooperate with local conservation commissions.

The Metropolitan State Hospital in Lexington and Belmont has tentative plans to divest itself of part of its property. The property that is important to the Belmont proposal is the eastern portion of the present state hospital site. This area is a wetland, but is currently under no development restrictions (Chapter 131, section 40a). To insure that the existing open character of this hospital site remains intact, the MAPC recommends that the eastern and wetland portions of the state hospital site be given to the Belmont Conservation Commission for conservation purposes when released from state hospital control.

The state, through the state hospital system, also owns property north of the Fernald State School and former Murphy General Hospital. The property in question lies in Waltham. It is an upland region which complements much of the lowland contained in the Belmont proposal. Similar to the state hospital property in Lexington and Belmont, this property should be given to a local conservation commission if the existing use ceases to function. In this instance, the land should be given for conservation purposes to the Waltham Conservation Commission.

With local effort and cooperation of state agencies, the area from the Audubon Highland Farms preserve to the state hospital water tower in Waltham will remain an open and unspoiled valley.

(58) Franklin Park and Arnold Arboretum—Boston

Franklin Park and the Arnold Arboretum were part of the original park system designed for Boston by Frederick Law Olmsted. Located in the core city of the region, they are heavily used areas.

In recent years, Franklin Park has not been used or maintained in a manner consistent with its potential. Presently, there are programs underway which will rejuvenate the park and re-

17. Ibid, pp. 3.6.



establish its value as a regional attraction. Most important of the new programs is the reconstruction of the Franklin Park Zoo. This facility will be the largest of its kind in the region and will be a major attraction. The new zoo will also attract people to the nearby arboretum. Hopefully, the new crowds will be maintained at levels consistent with the character of the arboretum. It is recommended that non-car modes of travel to these two areas be emphasized.

In 1965, the 265-acre Arnold Arboretum was designated as a National Historic Site. It is the most valuable open area within the core area of

the region. Unfortunately, many attempts have been made to divert portions of the arboretum for non-open space use. Considering its great beauty, scientific value, and its use as a passive recreation area, the Council is firmly opposed to any proposal that would divert any part of the arboretum to non-open space uses.

The MAPC supports the rehabilitation of the original Olmsted Park System. In this manner, Arnold Arboretum and Franklin Park will have a physical link to the other areas mentioned in the regional open space plan.

URBAN AREAS



The urban areas of our region have many open space and recreation problems that are not found in suburban and rural areas. The following chapter discusses some of the problems that are more particular to urban areas and offers policies and programs that can help to alleviate them.

Many proposals that affect the region's urban areas are found in the other chapters of this report. However, in this chapter, the focus is on the general open space problems facing urban areas and existing or proposed improvements.

Background

The communities of Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, Somerville and Watertown comprise the core cities of the region.

The open space and recreation problems of the densely developed urban communities are numerous but, in general, they can be classified into the following:

1. **An apparent lack of open land:** The National Recreation Association and the Urban Land Institute both recommend ten acres of open space per 1,000 population. The MAPC has adopted this standard for this report.

For the urban communities mentioned above there are five or less acres of open space per 1,000 population.¹⁸ In some neighborhoods in Boston, such as East Boston, the problem is particularly acute with less than three acres per 1,000 population.

To rectify this problem some communities such as Boston have begun programs to identify locations that can be used to significantly expand the total amount of open space available to its residents.¹⁹ Examples of such areas are vacant lots, wetlands, ledges and tax title lands. While urban areas seemingly have little potential for open expansion, Boston's imaginative program of identifying available acreage indicates that expansion and acquisition should be part of urban open space programs.

Maintenance and rehabilitation programs are also necessary to improve the quality of open space and recreation in

18. It should be noted that the 10 acre per 1,000 population standard is intended as a general guide for the core area defined above. The particular standard adopted by each community may vary. Boston, for example, uses a 5 acre per 1,000 standard.

19. See Appendix L.



urban areas and the diversion of existing public open space should not be allowed.

2. **Traffic Volumes:** The urban communities experience the daily flood of suburban commuters on their way to and from work in the central cities. This traffic, coupled with dense residential development which adds to the total number of cars, turns urban streets into barriers to pedestrian and bicycle traffic. As such, it is very difficult to link open space in urban areas, and it is difficult to create an open space system that reaches into all sections of the community.

Pedestrian and bicycle systems can be safely designed to act as links between major urban open spaces. The ongoing Boston Redevelopment Authority Program of expanding downtown sidewalk space is a good example of how to treat the problems caused by heavy traffic volumes.

3. **Pollution Problems:** Water, land, noise and air pollution problems are usually the

most severe in the densely developed urban areas. Pollution problems make it more difficult to locate new open space and recreation areas, and they lower the quality of experience offered at existing areas.



Pollution problems can be ameliorated with land use controls and in the case of noise and visual pollution, with buffering techniques.

4. **Specialized Open Space and Recreation:** The urban areas tend to have high percentages of old people, young people and poor people. These groups often cannot and do not use the same facilities. In some instances, the need for specialized facilities can increase the cost of open space and recreation and reduce its overall usefulness.

To ameliorate the problem mentioned above, many communities are now designing buildings and open areas that can accommodate a variety of uses. In this manner, public space in urban areas will be effectively utilized.

The necessity for more open space and recreation opportunities in urban areas is obvious. The MAPC has not attempted to develop a comprehensive plan for each of the core communities; that must remain a local prerogative. Rather, the MAPC proposes general policies and programs that can be included in the open space and recreation plans of all communities. Hopefully, this will provide consistency with the regional open space and recreation policies and plans while emphasizing the responsibility of individual communities to develop their own site-specific proposals.

To augment the policies and programs presented in this section, the MAPC has prepared an urban design poster entitled *Forgotten Urban Areas*, that describes techniques which can be used to beautify the landscape of the city.



Policies for Urban Open Space and Recreation

- *Urban open space should be designed or redesigned to sustain year-round use where appropriate. Considering the shortage of urban open space, every attempt should be made to fully utilize all existing facilities. Implementation of this policy will necessitate actions such as lighting for night use, snow removal (where appropriate) and increased supervision and maintenance.*
- *The use and availability of existing open space in urban areas should be one of the educational functions of local park and recreation departments. In many instances, this may involve public relation programs, in other instances it may involve on-site supervision and control.*
- *Programs and activities should be designed to provide for diversity in recreational opportunities and experiences. The urban resident must be provided with alternative forms of open space and recreation opportunities throughout the city. Both active and passive open space and recreation areas should be designed and made available in urban areas.*
- *Urban open space and recreation areas should be accessible by foot, bicycle and public transportation. Public agencies should strive to develop an urban open space system that is not dependent on the private car. To this end, pedestrian and bicycle trails should be considered as the primary mode of access to urban recreation areas. Special consideration should also be given to making urban open spaces and places of interest accessible to handicapped people.*
- *Barriers to movement and vision in urban areas should be removed. In general, this policy refers to major transportation facilities and large unused areas such as abandoned warehouses and factories that destroy the possibility of a continuous and usable open space system, or cause severe blight and safety problems.*
- *An urban open space and recreation system should be designed to complement the urban area. Open space should be used in a manner that highlights the character of urban areas, and provides the opportunity to experience the city in a different light.*
- *Highest priority for capital expenditures should accrue to neighborhoods with high density and low income, and to neighborhoods most deficient in the total amount of open space per 1000 residents.*
- *Existing open space and recreation areas should not be diverted to non-open space recreation use, and existing areas should be carefully maintained.*
- *Also, all proposed abutting uses should be carefully assessed in terms of environmental impacts on existing open space. In no instance should an abutting use be allowed if it will degrade in any way the quality of the existing public open area.*
- *Urban communities should involve their residents in efforts to improve open space/recreation areas. In some instances, this may involve extensive public meetings. In others, it may involve encouraging neighborhood groups to undertake beautification projects. For example, many communities have adopted a "tree for a tree" program, where the city will plant one tree in your neighborhood or in front of your house for every one that you purchase.*
- *Large institutional holdings, especially in urban communities, should be considered for open space use when a change in existing use would result in a non-institutional character. For example, a large hospital moving from the city to a suburban location and the expected reuse of the site is to be industrial.*

Program

As stated earlier, this program is not intended to provide site specific proposals for each community. Rather, it is intended as a general program package that can be adopted by all core commu-

nities to supplement their own open space/recreation plans.

- *Urban communities should undertake a study to identify all potential areas for future open space and recreation expansion. Included in this study should be tax title lands, wetlands, rock outcroppings, vacant lots, and similar areas. The Boston Redevelopment Authority's "Boston Urban Wilds" program can be considered as a model for such a study. This study, along with surveys of existing public open areas, should be the basis of future open space and recreation programs.*
- *Bicycle trails and pedestrian paths should be designed to accommodate pedestrians and bicycles with rights of way set aside for bicycles and wider sidewalks for easier pedestrian flow. A model program is the Boston Redevelopment Authority's effort to widen and landscape sidewalks in downtown Boston. This program allows for more pedestrian accommodation, thus lessening pedestrian traffic on car choked streets.*
- *Landscaping of median strips, intersections, and street corners should be instituted by all communities and especially urban communities.*

MACP's urban design poster, *Forgotten Urban Areas*, provides detailed information concerning these concepts. The poster suggests the use of more natural materials in urban areas and highlights banking as a landscape architectural technique to enhance the scenic value of these often forgotten urban areas.

- *Community entertainment programs, similar to Boston's Summerthing, should be developed by all core area communities. Programs such as these provide free entertainment to large numbers of people and they can emphasize and utilize local talent.*
- *While there are few large open areas remaining in the core communities that can be developed for open space and*

recreation, there are numerous medium-sized and small abandoned lots that can be used as parks and neighborhood playgrounds. A program to develop suitable abandoned lots or underused areas into parks should be instituted by every local conservation commission or redevelopment authority.

- *All redevelopment proposals should be required to provide adequate open space for employees or residents preferably 10 acres per 1,000 residents. An example of where a program of this type should be developed is the 18-acre "fire section" of Chelsea. New development in this area should include open space and recreation facilities.*
- *It is recommended that communities create and adopt landscape architecture and architectural review boards and strict sign control ordinances. In some situations, on-street parking might be banned and the available right-of-way used for bicycle paths.*
- *Programs designed to integrate historic and cultural areas into the open space and recreation experience of urban residents should be developed by local recreation departments. In this manner, the city itself can become a recreation experience. A fine example of such a program is Boston's Freedom Trail.*

HISTORIC AREAS

Background

Preservation of historic sites and districts adds an educational and cultural dimension to the experience of city life. In general, historic areas are compatible with open space and educational land uses.

When historic areas are adjacent to open space and educational land uses, care must be exercised to assure that the character of the historic area is not altered for the purpose of accommodating large numbers of people.

Metropolitan Boston is one of the oldest settlements in the United States. Numerous historic sites from all periods of American History, many of regional and national significance, are found throughout the area. Because of their compatible relationship, historic areas and open space can be integrated with the regional open space system and become focal points of the open space systems.

For the purposes of this plan, "significant" historic areas are those that are listed in the National Register of Historic Places, and all sites listed by state and local historical commissions.



While this section should not be construed as a historic areas plan, the MAPC does suggest the following policies as a means to fully utilize the value of all historic areas in a regional open space and recreation system, while preserving the existing character of the historic site.

Policies

- *Local governments should be encouraged by state and regional agencies to create historical commissions in accordance with (M.G.L.) Chapter 40 Section 8d as amended.*
- *An accurate survey of all historic sites should be a priority goal for all state and local historical commissions. This survey should be updated periodically to reflect the changes in ownership, building or site condition, and any additional historic sites.*
- *Where possible, the development of a historic district should be coordinated with the development of a local or sub-regional open space facility. For example, see chapter entitled "The Coast," which discusses the MAPC proposals for the historic areas of Salem and Marblehead in relation to public open space along their respective coastlines.*
- *The definition of historic areas should be broad enough to include any area, facility or building that represents a particular part of our heritage. For example, archaeological sites, geologic features associated with our heritage, historic roads, bridges, factories, railroads, farms and landscapes. In this manner, the full spectrum of our past achievements can be preserved and enjoyed.*
- *Sufficient acreage should be included with any historic site or district to protect both the character and setting of the area in question. The amount of land will obviously vary according to the site.*

IMPLEMENTATION

Criteria

This report has made many recommendations concerning the acquisition expansion and rehabilitation of open space and recreation areas. Those projects the council considers necessary for the creation of adequate open space opportunities in the region have been highlighted.

Using the standards and realities of today, we can produce a list of priority projects. However, it has been our experience that conditions and standards are always changing and new problems will arise that were not foreseen. As a result, priority listing are often rendered useless at an early date.

Rather than provide a priority listing, criteria by which all projects should be measured is presented. The Council's bias will be toward those areas with regional significance and those areas that are relatively unique. Hopefully, the criteria will stand the test of time and changing standards.

It should be noted that we have not weighted any particular criteria more than another, since the criteria by which the value and necessity of any project is measured will also change over time. The decisions as to which criteria are more important must be made by the implementing agency at the time the project is considered.

There is no particular number of criteria that a project should meet in order to be classified as a project worthy of implementation. Again, these decisions must be made at the time the project is being considered. Hopefully, future projects will be measured against all the criteria discussed below.

- **Regional vs. Local**

Is the area of regional or local significance or both? Proposals that cross community boundaries are not necessarily regional, and proposals that are wholly contained within a community are not necessarily local in significance. If the proposal is such that it can be easily utilized by more than just the local populace, it should be considered as having regional significance. We should strive to protect those areas that have regional significance, since they can serve both a local and regional need.

- **Linkages**

Can the proposal be linked with other local and/or regional open areas? It is important to create an open space system that allows for a variety of modes of access. A linked system can provide this variety, a fractionalized system cannot.

- **Development Pressure**

Is the proposed open space/recreation area in imminent danger of diversion to other land uses? Those areas that have been shown to have value as open space but are under pressure for alternative use should be given priority consideration by all agencies whose responsibility it is to create and maintain open space and recreation areas.

- **Unique Natural Characteristics**

Is the area under consideration a unique, or part of a unique natural feature of the region? For example, is it the highest hill, is its geologic character rare, does it represent a landscape that cannot be easily duplicated anywhere else in the region, etc. Areas with these qualities should be preserved for the public benefit.

- **Access**

Is the area under consideration easily accessible? Is it accessible by more than one mode of access? The greater an area's accessibility the greater its value since it can be used and/or appreciated by greater numbers of people. This criteria should be applied to all open space/recreation areas except wildlife sanctuaries and conservation areas.

- **Urban Location**

Is the proposed project in an urban and densely settled portion of the region? Given the need for open space and recreation areas in the densely settled areas of the region, those proposals that are located in urban areas should be considered as vital to a well balanced regional open space system.

- **Historic Value**

Does the area under consideration have any buildings or sites of local, state or national historic interest? Areas with

bona fide historic value should be protected.

- **Water Resources**

Does the proposal have any relevance to the quantity and quality of fresh water supplies? Those projects protecting fresh water supplies, or their watersheds should be preserved for the public benefit. Those projects that may reduce the quantity or quality of fresh water should be carefully considered.

- **Vegetation**

Does the proposal affect any vegetation grouping that is particularly attractive, ecologically valuable or unique? All proposals should attempt to protect the natural vegetation of the region, particularly those associations that are rare.

- **Wildlife**

Does the proposal effect significant wildlife habitats or populations of wildlife? All proposals should consider the value of wildlife and their habitat. Large populations of wildlife should be protected.

- **Consistent With Other Plans**

Is the proposal consistent with local, regional and state plans for open space and recreation? All proposals should strive to be consistent with accepted plans and policies of local, regional and state agencies.

- **Cost and Benefit**

Are the benefits to be derived from the proposal consistent with the total expenditure? Proposals should not be implemented if they have excessive costs that will result in non-action on other proposals or benefit only a few people.

- **Maintenance**

Can the proposal be properly managed? Implementing agencies should be certain that they have the managerial and financial resources to properly maintain an open space/recreation area.

and new funds, which complement existing programs, are essential to the proposed regional open space system. New programs will necessitate increased taxes or a shift in government spending priorities, or a mixture of both alternatives.

Before the public will or should accept any redirection of public funds, it must be shown the necessity for the new programs and expenditures. Therefore, as a prelude to any proposals for increased open space and recreation funds, the state, regional organizations and local communities must develop and implement educational programs that clearly indicate the need for further open space expansion. Assuming that the need for additional open space and recreation funds will be seen as having merit, the MAPC suggests that the following recommendations be given serious consideration for any implementation program.

1. The Metropolitan Area Planning Council, based on recommendations from its Technical Advisory Committee on Regional Organization, has submitted legislation for the creation of a Metropolitan Service Commission. In essence this commission would unite under a single operating agency many of the existing public agencies now serving the MAPC region. The Council reiterates its support for the Metropolitan Service Commission (MSC) and recommends that if created the MSC should play the major role in the implementation and administration of all open space/recreation plans and programs in the MAPC region.
2. The Bureau of Outdoor Recreation's Land and Water Conservation Fund is a federal funding program that has been utilized by many communities. While it is a familiar program, and one that has had a reasonable amount of success, it cannot at its present level of funding meet the open space and recreation demands of the future. It is recommended that our state officials work with other state officials in the nation to urge the federal government to increase the annual funding for this program.

Proposed Implementation Techniques

Existing funding programs cannot at the present level of expenditure meet the open space/recreation demands of the future. New programs

3. Similar to the recommendation above, the Commonwealth of Massachusetts should significantly increase the annual funding of its Self-Help Program. This program is particularly useful since it usually takes a much shorter period for funding to be approved. With an increased commitment to this program, more communities will be able to protect potential passive recreation areas that are in imminent danger of development.
4. As stated in this report, five-sixths of the Massachusetts shoreline is in private control. One of the major premises of this plan is that the coastline and access to it is part of the natural heritage of the area's residents. While existing federal and state funding programs have some application to the coastline, it is the MAPC's position that because of the importance of the coastline as an open space resource, and because of the high cost of coastal acquisition, a separate ongoing coastline acquisition fund should be established by the state. The format of the program should be similar to that of the existing Self-Help program, but in this instance, only conservation commissions from coastal communities would be eligible to apply for assistance.
5. Local governments should encourage volunteer programs that involve members of the general public with specific open space/recreation problems. For example, cleanup fix-up campaigns, while cosmetic in nature, have involved many people in their neighborhoods and have improved living conditions. Tree planting programs where the community provides one free tree for every tree planted by an individual have helped landscape many barren urban areas.

Citizen associations should also be encouraged to maintain public parks in their neighborhoods, organize petition drives and sponsor fund raising campaigns to save certain buildings or sites for public enjoyment. Citizen groups can

be powerful and useful organizations. They should be mobilized to help implement this plan.

Also, public agencies should continue to cooperate with private organizations dedicated to conservation, such as the Trustees of Reservations, the Essex County Greenbelt Association, Massachusetts Audubon Society, Sudbury Valley Association, watershed associations and many others.

6. The Commonwealth of Massachusetts should amend its regulations concerning Chapter 30, Sections 61 and 62, which require the filling of environmental assessment forms for certain private projects and all state supported projects.

It is recommended that all private projects affecting inland or tidal wetlands and/or private projects one acre or greater in total size be required to submit a full environmental assessment form for review purposes. Public agencies responsible for the planning, design, construction and maintenance of transportation facilities should by state law be obligated to study the possibility of utilizing all public rights of way for linear park purposes.

Furthermore, if a linear park is shown to be feasible and consistent with local plans it should be given priority by all state agencies concerned with the funding of open space and recreation projects.

Existing Implementation Techniques

Acquisition

Land and Water Conservation Fund Act of 1965

Public Law 89-578, 78 State. 897

Administered by the U.S. Department of Interior's Bureau of Outdoor Recreation, the fund allocates money to communities and political subdivisions for planning, acquisition and development of public outdoor recreation areas. Under this Act, local agencies may be reimbursed

up to 50 percent of the costs of purchasing land. This program is administered through the Massachusetts Division of Conservation Services.

Massachusetts Self-Help Program
General Laws Chapter 132A, Section 2

Administered by the Division of Conservation Services which is part of the Executive Office of Environmental Affairs, this program offers towns and cities with conservation commissions up to 50 percent reimbursement for the cost of land purchased or developed for conservation or passive outdoor recreation. The Bureau of Outdoor Recreation's Land and Water Conservation Fund and the state's Self-Help Program may be applied together. In that case, a community may receive up to 75 percent reimbursement for the cost of purchasing land.

Revenue Sharing
Public Law 92-572, Acts of 1972

Open space/recreation lands can be purchased with community funds received through the federal government's revenue sharing program.

Regulation

National Register of Historic Places
National Historic Preservation Act of 1966
80 Stat. 915-16 United States Code 470

Under this program the National Park Service can make funds available for the restoration and protection of significant historical, archeological, architectural and cultural sites.

Eminent Domain

This is usually a means of last resort. Taking land under eminent domain requires a two-thirds vote of the town meeting or city council. Accompanying the taking, a reasonable compensation must be paid to the landowner.

Conservation Restriction Act
Chapter 184, Sections 31-33

Simply stated, a conservation restriction or easement is a written agreement between a property owner and a governmental or private agency by which the owner agrees to restrict development of his land in specified ways. For example, a restriction can take the form of prohibiting construction on the land of a building detrimental to the preservation of a historic site. Conservation restrictions vary widely. They may

be purchased or granted through a gift. The owner of land subject to conservation restriction has all the rights and benefits of ownership consistent with the terms of the restriction. The restriction does not transfer title to the land nor does it dispossess the owner. It can be made binding on all future owners of the land if special procedures are followed.

A conservation restriction often qualifies a property owner for certain tax advantages (G.L. Ch. 719, Acts of 1972) while still permitting his use of the land for such purposes as recreation, farming and other activities consistent with the restriction. Properties under conservation restrictions must be reassessed to recognize the limitations on development changes or uses in determining fair market value.

Floodplain and Wetland Zoning
Zoning Enabling Act MGL Ch. 40A, Sec. 2

In Massachusetts the Zoning Enabling Act specifically permits municipalities to safeguard lands "deemed subject to seasonal or periodic flooding." The Act further states that these lands "shall not be used as to endanger the health or safety of the occupants thereof." Floodplain zoning, although designed primarily to prevent damage from floods, can permit use of low intensity recreation areas while restricting urban development. Conservancy Zoning, a device adopted in several Massachusetts towns, is essentially a variation of floodplain zoning, applying restrictions to periodically wet and water areas.

Planned Unit Development—Cluster Zoning
Chapter 808 of the Acts of 1975

The basic idea behind cluster zoning is to create a more attractive environment by permitting a developer to erect houses on smaller lots than the ordinance normally requires, provided that the remaining land is permanently preserved for its natural beauty and recreational value as neighborhood open space.

Historic Districts
MGL Chapter 40C

This legislation authorizes cities and towns to establish historic districts to protect historic sites and the areas of their setting. By the appropriate vote of the city or town, the historic district

imposes rigorous controls over an area to prevent visible changes from destroying the historic character of the area.

Wetlands Protection Act

General Laws Chapter 131 Section 40

This act controls, but does not ban, development on wetlands. Wetlands are defined here as inland wetlands (marshes, meadows, swamps bordering on rivers, streams and ponds) or just about any land which is periodically wet. The act also covers coastal wetlands. The law requires that any person or governmental agency intending to remove, fill, dredge or alter a wetland must insure, by following various procedural and technical steps, that the activity will have no adverse effect on water supplies, flood prevention, pollution prevention or fisheries protection. In effect, the owner must develop his wetland in accord with the public's interest and safety.

Inland Wetlands Restriction Act

General Laws Chapter 131 Section 40A

This legislation is designed to supplement the regulative approach of the Wetlands Protection Act with a planning approach not dependent upon the landowner coming forward to apply for a permit. The commissioner of the Department of Environmental Management, in order to preserve and promote public safety, private property, wildlife, fisheries, water resources, floodplain areas and agriculture is directed by this law to issue orders restricting development on inland wetlands.

Scenic Rivers Act

General Laws Chapter 21, Section 17B

This act empowers the state to restrict or prohibit dredging, filling or otherwise altering or polluting scenic and recreational rivers in the Commonwealth. The restrictions also include continuous land up to 100 yards on each side of the river or stream banks.

Coastal Zone Management Act

Public Law 92-583, 1972

Under the act, state governments are the focal point for the management, beneficial use, protection, and development of the land and water resources of the U.S. coastal zones. To assist the states, a two-stage federal granting program is established. Grants to help the state in develop-

ing a management program are followed by grants to the state in administering that program. The funding arrangement is a 2/3 federal, 1/3 state matching program.

The coastal zone management is administered by Natural Oceanic and Atmospheric Administration (NOAA) in the U.S. Department of Commerce, thus permitting full coordination with other ocean related programs, i.e. Natural Sea Grant Program.

Only those coastal lands which have a direct and significant impact on coastal waters may be regulated under the act, thus insuring compatibility with future land use legislation.

The law does not require state participation. The incentive to participate is the desire for federal money. As an additional incentive, a participating state has an advantage in dealing with the federal government if it has an approved coastal zone management program, since all federal projects and permits must conform to the state's approved management program. If there is no approved program, a federal project could be commenced against state wishes.

The act also authorizes the establishment of an estuarine sanctuaries program in which the federal government provides grants (up to 50%) to assist states in the acquisition and operation of estuarine sanctuaries for educational and research purposes.

Under the program, states first receive planning grants to develop a management program. Once the program is approved, they receive an administrative grant. The Secretary of Commerce exercises continual approval authority over both the creation and administration of the state's coastal zone management program. If he believes the purposes of the act are not being met, he may discontinue grants.

In Massachusetts, a Task Force was formed in January, 1974, to provide overall direction to the coastal management effort. This Task Force is comprised of representatives from a wider range of interests including the state legislature, state cabinet level agencies, the state university, industry, environmental groups, fisheries, regional and local units of government and federal agency interest.

The Executive Office of Environmental Affairs has been designated as the head agency to

receive federal funding under the Act and to direct the Commonwealth planning program for Coastal Zone Management.

Taxation

Classification and Taxation of Forest Lands and Forest Products

General Laws Chapter 61, Sections 1-7, as amended in 1969 by Chapter 873

This law allows forest land to be valued at no more than \$10 per acre if the owner of 10 or more acres (valued at not over \$400 per acre at the time of application) practices forest management to improve the quantity and quality of a continuing forest crop.

Special Massachusetts Agricultural Law

General Laws Chapter 61A Acts of 1973

In general, this legislation taxes farm land owners for the actual, not potential, use of the land, thus not only helping the small farmer stay in business, but also protecting open agricultural areas from urban development pressures.

Gifts

Gifts of Land

A community state or private charitable trusts may acquire land through private donation. Such properties as wetlands, nature preserves, wildlife sanctuaries, historic sites and recreational lands are often donated by private owners to the public.

Private organizations, such as the Trustees of Reservations, are also in a position to accept gifts of land for the public benefit. In many instances, this technique has preserved valuable acreage for public enjoyment.

Gifts of Land in Trust

A well recognized device in Massachusetts for preserving land in its natural state and for historic sites is a charitable gift in trust. Properties given to private land trust are insured against being diverted for other municipal purposes.

Gifts of land in trust are deductible from state and federal income taxes.

APPENDIX

Appendix A

Federal, State and MDC Open Space in the MAPC Region

Major Holdings Only

State Parks—Department of Environmental

Management

Name	Municipality	Acreage
Ashland	Ashland	470
Borderland	Sharon/Eastern	1,301
Bradley W. Palmer	Hamilton/Ipswich/Topsfield	721
Cochituate	Framingham/Natick/Wayland	1,126
Cushing Memorial	Scituate	7
Standish Monument	Duxbury	29
Plum Island	Ipswich	76
Walden Pond	Concord/Lincoln	117
Wampatuck	Cohasset/Hingham/Norwell/Scituate	2,748
Hopkinton	Ashland/Hopkinton	960
Whitehall	Hopkinton	877
Walden	Concord/Lincoln	350
Farnum Smith	Carlisle	818
Medfield-Charles River	Medfield	—

State Forests

Name	Municipality	Acreage
Boxford	Boxford/N. Andover/Middleton	740
Bristol-Blake	Norfolk	141
Carlisle	Carlisle	58
F. Gilbert Hills	Foxborough/Wrentham	832
Franklin	Franklin/Wrentham	881
Harold Parker	Andover/Boxford/Georgetown/Middleton/N. Andover/N. Reading/Tewksbury	3,511
Marlborough	Marlborough	60
Medfield	Medfield	37
Sudbury	Hudson/Marlborough/Stow	234
Willowdale	Ipswich/Topsfield	1,496
Wrentham	Plainville/Wrentham	993

Metropolitan District Commission

Name	Municipality	Acreage
Breakheart Reservation	Saugus/Wakefield	570
Blue Hills Reservation	Braintree/Canton/Milton/Quincy/Randolph	5,489
Middlesex Fells Reservation	Malden/Medford/Melrose/Stoneham/Winchester	2,060
Neponset River Reservation	Boston/Canton/Dedham/Milton/Westwood	
Stony Brook Reservation	Boston	
Havey Beach	Boston	
Nahant Beach	Lynn/Nahant/Swampscott	
Nantasket Beach	Hull	94
Constitution Beach	Boston	47
Revere Beach	Revere	99

U.S. Department of Interior

Bureau of Sport Fisheries and Wildlife

Name	Municipality	Acreage
Great Meadows National Wildlife Refuge	Bedford/Billerica/Carlisle/Concord/Lincoln/Sudbury/Wayland	2,518
Plum Island and Parker River	Ipswich/Newbury/Rowley (Ipswich only)	1,424

SOURCE: Massachusetts Outdoor Recreation Plan 1971. Massachusetts Department of Natural Resources.

NOTE: Massachusetts Department of Natural Resources became the Department of Environmental Management (DEM) July 1, 1975.

National Park Service

Name	Municipality	Acreage
Minuteman National Historic Park	Concord/Lexington/Lincoln	508
Salem Maritime	Salem	
Saugus Iron Works	Saugus	

Appendix B

Major Private Holdings

Trustees of Reservation

Reservation	Location	Acreage
Whitney and Thayer Woods	Cohasset/Hingham	799
Old Manse	Concord	8
Pegan Hill	Dover/Natick	32
Mount Ann Park	Gloucester	87
Appleton Farms Grass Rides	Hamilton	94
World's End	Hingham	251
Richard T. Crane, Jr. Memorial	Ipswich	1,352
Ipswich		
Cornelius and Mine S. Crane	Ipswich/Essex	700
Wildlife Refuge		
Aggassiz Rock	Manchester	106
Crowninshield Island	Marblehead Harbor	5
Fork Factory Brook	Medfield	62
Henry L. Sharruck Reservation	Medfield	270
Meadow Lots	Medfield	16
Medfield Rhododendrons	Medfield	271
Noon Hill	Medfield	52
Rocky Woods	Medfield	438
Bridge Island Meadows	Millis	80
Governor Hutchinson's Field	Milton	10
Pierce House	Milton	6
Charles River Peninsula	Needham	29
Albert F. Norris Reservation	Norwell	100
Halibut Point	Rockport	12
Misery Islands	Salem	83
Rocky Narrows	Sherborn	77
Pine and Hemlock Knoll	Wenham	14
Total		4,854

Massachusetts Audubon Society

Reservation	Location	Acreage
Highland Farm	Belmont	45
Eastern Point	Gloucester	26
Ipswich River	Hamilton	2,300
Waseeka	Holliston/Hopkinton	140
Drumlin Farm	Lincoln	220
Marblehead Neck	Marblehead	15
Broadmoor	Natick	175
Straitmouth Island	Rockport	33
Moose Hill	Sharon	227
Little Pond	Sherborn	262
Total		3,443

Essex County Greenbelt Association

Reservation	Municipality	Acreage
Ox Pasture		12
Long Meadow		8
Livermore Woods		9.59
Chaplin—Perley Woods		5.3
Wheatland Marsh		7
Holyoke Lot		10
Peabody Pasture	Boxford	20
Haynes Woodlot		12
Stephen Maddock Memorial		4
Maddock Wildlife Reservation		26
Ingalls Memorial Wetland		1
Ingalls Memorial Wetland		2
Fish Brook Meadow		18
Killam Island		26.75

Appendix B (continued)

Major Private Holdings

Essex County Greenbelt Association

Reservation	Municipality	Acreage
Allyn Cox Reservation	Essex	31
Baldpate Hill	Georgetown	17
Goose Cove Reservation		26
Window-on-the-Marsh		2.5
Potter-Rust Island		3.25
Collens Saltmarsh		2.5
Wingaersheek Upland	Gloucester	65
Whitemore Conservation Restriction		60
Curtis Saltmarsh		13
Peggy's Island		1
Marshall Reservation		9
Winthrop Conservation Restriction		178
Black Brook Woodlot	Hamilton	75
Willowdale Mill Reservation		22
Major General George Patton Reservation		7.8
Roland Clark Reservation		3
Horne Conservation Restriction		11.7
Bird Pasture	Ipswich	10
Julia Bird Reservation		7
Julia Bird Reservation #3		20
Julia Bird Conservation Restriction		6
Moody Island Tracts		52
Barett Reservation		74.5
Clapp Woodlot		8
Sanford Reservation		7
Maddock Memorial Wetland	Middleton	8
Capt. Bill Woodlot		33
Sawyer's Riverfront		2
Hoope's Saltmarsh		22
Hoope's Conservation Restriction	Newbury	10
Cross Meadow		5
Fish Cedar Swamp	North	7
Farnsworth Woodlot	Andover	83
Eldredge Conservation Restriction	Rockport	28
Alexander Saltmarsh		105
Arthur W. Ewell Reservation	Rowley	31.3
Thomas Sanders Reservation		4.5
Banus Reservation	Topsfield	2.7
Major General George Patton Reservation		23.3
Gilbert & Sally Steward Conservation Restriction		21.1
Gilbert Steward, Jr. Conservation Restriction		21.1
Victoria T. Steward Conservation Restriction		6.5
Campbell Steward Conservation Restriction		36.6
Poore's Pond		7
Poore's Marsh	West Newbury	4.5
Total		1320.99

SOURCE: *Natural Areas: Historic Sites Handbook* (Massachusetts: Trustees of Reservations, 1974).
Massachusetts Outdoor Recreation Plan 1971, Massachusetts Department of Natural Resources.
 Essex County Greenbelt Association Reservation Map, 1975.

NOTE: Massachusetts Department of Natural Resources became the Department of Environmental Management (DEM) July 1, 1975.

Appendix C

Population MAPC Region

Town	1970	1990	% increase	Town	1970	1990	%increase
Acton	14770	26000	+77%	Medway	7829	10800	+38%
Arlington	53557	53600	0	Melrose	33198	37200	+12%
Ashland	8882	14000	+59%	Middleton	4044	5650	+40%
Bedford	13513	18500	+37%	Milford	19352	21800	+13%
Bellingham	13967	15500	+10%	Millis	5795	10800	+86%
Belmont	28314	28600	+ 1%	Milton	27118	28000	+ 3%
Beverly	38370	52000	+35%	Nahant	4144	4200	+ 2%
Bolton	1849	4650	+151%	Natick	31047	39100	+27%
Boston	641000	581000	- 9%	Needham	29709	38700	+30%
Boxborough	1451	5300	+266%	Newton	91073	98000	+ 8%
Braintree	35053	42000	+20%	Norfolk	4656	8450	+82%
Brookline	58117	63000	+ 9%	North Reading	11264	14900	+33%
Burlington	21980	31000	+41%	Norwell	7795	11000	+41%
Cambridge	100393	103000	+ 3%	Norwood	30858	35850	+16%
Canton	17100	29000	+70%	Peabody	48080	55100	+15%
Carlisle	2871	11500	+297%	Pembroke	11193	13200	+18%
Chelsea	30643	23000	-30%	Quincy	87955	95000	+ 8%
Cohasset	6958	10900	+58%	Randolph	27035	32000	+19%
Concord	16148	24200	+50%	Reading	22539	29500	+31%
Danvers	26230	33200	+19%	Revere	43159	45100	+ 5%
Dedham	27650	27400	- 1%	Rockland	15715	18700	+19%
Dover	4529	8550	+88%	Rockport	5636	9050	+78%
Duxbury	7636	10600	+39%	Salem	40542	39500	- 2%
Essex	2670	5100	+86%	Saugus	25124	29100	+16%
Everett	42478	37500	-13%	Scituate	16973	20900	+24%
Framingham	64048	77000	+20%	Sharon	12369	17800	+44%
Franklin	18067	24100	+33%	Sherborn	3316	7500	+128%
Gloucester	27941	33000	+18%	Somerville	88732	70700	-20%
Hamilton	6373	10900	+71%	Southboro	5798	9800	+67%
Hanover	10100	15100	+50%	Stoneham	20711	21700	+ 5%
Hingham	18800	24800	+32%	Stoughton	23514	32500	+38%
Holbrook	11775	13800	+17%	Stow	3984	6600	+65%
Holliston	12069	17000	+41%	Sudbury	13506	28000	+107%
Hopkinton	5981	10400	+74%	Swampscott	13589	16000	+18%
Hudson	16089	23100	+37%	Topsfield	5225	9200	+77%
Hull	9946	8200	-17%	Wakefield	25402	32400	+28%
Ipswich	10750	15700	+47%	Walpole	18149	29150	+60%
Lexington	31893	38900	+22%	Waltham	61582	81500	+60%
Lincoln	7567	11400	+50%	Watertown	39295	33300	-15%
Littleton	6380	11100	+74%	Wayland	13456	23500	+74%
Lynn	90278	86300	- 3%	Wellesley	28047	31000	+11%
Lynnfield	10818	14800	+37%	Wenham	3770	7400	+95%
Malden	56127	53100	- 5%	Weston	10878	16900	+55%
Manchester	5151	9700	+88%	Westwood	12746	19700	+55%
Marblehead	21295	21300	0	Weymouth	54569	60500	+11%
Marlborough	27936	35400	+27%	Wilmington	17103	27100	+58%
Marshfield	15223	30200	+100%	Winchester	22211	24200	+ 9%
Maynard	9710	11400	+18%	Winthrop	20335	16300	-20%
Medfield	9821	15800	+61%	Woburn	37400	46400	+24%
Medford	64409	67000	+ 4%	Wrentham	7494	11000	+47%

SOURCE: Eastern Massachusetts Metropolitan Area Water Quality Control Project on Planning (Boston: Metcalf and Eddy, 1973).

Population MAPC Area

Area	1970	1990	Change	% Change
Core*	1,252,308	1,123,900	-128,408	-10%
Suburban/				
Rural	1,720,502	2,544,360	+823,858	+48%
Totals	2,972,810	3,668,260	+685,450	+23%

*Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, Somerville, Watertown.

SOURCE: Eastern Massachusetts Metropolitan Area Water Quality Control Project Report on Planning. (Boston: Metcalf and Eddy, 1973).

Appendix D

Great Ponds in the MAPC Region

Essex County		Norfolk County	
Pond	Location	Pond	Location
Chebecco Lake	Essex/Hamilton	Beaver Pond	Bellingham
Niles Pond	Gloucester	Glenn Echo Lake	Canton/Stoughton
Becks Pond	Hamilton	Wigwam Pond	Dedham
Gravelly Pond	Hamilton	Uncas Pond	Franklin
Round Pond	Hamilton	Miramichi Lake	Foxborough
Pleasant Lake	Hamilton/Wenham	South End Pond	Millis
Flax Pond	Lynn	Kingsbury Pond	Norfolk
Brown's Pond	Peabody	Wolemopoag	Sharon
Palmer's Pond	Swampscott	Waban Lake	Wellesley
Coy's Pond	Wenham	Buckmaster Pond	Westwood
		Whitman's Pond	Weymouth
		Archer Lake	Wrentham
		Lake Pearl	Wrentham
Middlesex County		Plymouth County	
Spy Pond	Arlington	Island Creek Pond	Duxbury
Walden Pond	Concord	Oldham Pond	Hanson/Pembroke
White Pond	Concord	Furnace Pond	Pembroke
Bateman's Pond	Concord	Great Sandy Bottom Pond	Pembroke
Farm Pond	Framingham	Little Sandy Bottom Pond	Pembroke
Lake Winthrop	Holliston	Stetson Pond	Pembroke
North Pond	Hopkinton/Milford	Musquashiat Pond	Scituate
Boon or Books Pond	Hudson/Stow		
Dug Pond	Natick		
None Such Pond	Natick/Weston		
Little Pond	Natick/Sherborn		
Hammond Pond	Newton		
Martins Pond	North Reading		
Quannapowit Lake	Wakefield		
Hardys Pond	Waltham		
Dudley Pond	Wayland		
Keyes Pond	Westford		
Sought For Pond	Westford		
Silver Lake	Wilmington		
Wedge Pond	Winchester		
		Suffolk County	
		Jamaica Pond	Boston
		Worcester County	
		Little Pond	Bolton
		West Pond	Bolton

SOURCE: Massachusetts Water Laws (Boston: The Massachusetts Water Resources Commission, 1970)

Appendix E

Percentage of Open Space by Municipality

Municipality	Open Space Recreational ¹	Open Transitional ²	Forest ³	Total Acres	Municipality	Open Space Recreational ¹	Open Transitional ²	Forest ³	Total Acres
Acton	.40	5.10	56.99	12916	Dedham	1.86	1.91	39.68	6958
Arlington	4.39	1.26	5.48	3484	Dover	0.37	6.25	64.35	9970
Ashland	1.44	1.96	65.37	8240	Duxbury	2.92	4.34	52.38	15454
Bedford	1.81	3.95	43.73	8940	Essex	0.62	1.87	49.12	9336
Bellingham	1.38	8.36	55.63	11949	Everett	1.57	2.64	0.34	2344
Belmont	6.74	3.01	16.78	2920	Foxborough	2.17	6.42	62.08	13032
Beverly	2.71	3.33	42.85	9926	Framingham	2.16	4.03	36.43	16848
Bolton	1.93	3.45	69.96	12773	Franklin	0.68	6.84	61.89	17227
Boston	6.08	4.33	7.23	31244	Gloucester	1.89	2.19	56.94	16973
Boxborough	.16	5.74	71.36	6680	Hamilton	1.56	1.23	59.30	9574
Braintree	3.05	4.70	38.09	9100	Hanover	0.40	3.91	59.92	9978
Brookline	9.19	0.91	13.00	4359	Hingham	1.52	1.17	58.62	14501
Burlington	1.16	7.05	35.04	7528	Holbrook	0.62	4.27	60.13	4769
Cambridge	5.45	2.49	2.25	4693	Holliston	0.47	1.61	39.73	21176
Canton	4.67	4.36	49.16	12460	Hudson	.57	2.60	52.81	7680
Carlisle	.07	3.59	75.08	9884	Hull	10.18	4.83	14.38	1738
Chelsea	1.68	11.40	—	1604	Ipswich	2.86	4.94	40.01	23204
Cohasset	2.15	3.16	61.38	6412	Lexington	2.41	4.19	28.73	10972
Concord	1.75	4.40	47.91	16536	Lincoln	0.28	4.97	51.98	9544
Danvers	1.13	5.68	27.03	8738	Littleton	.42	4.75	51.93	11345

(continued)

Appendix E (continued)

Percentage of Open Space by Municipality

Municipality	Open Space Recreational ¹	Open Transitional ²	Forest ³	Total Acres	Municipality	Open Space Recreational ¹	Open Transitional ²	Forest ³	Total Acres
Lynn	2.97	1.89	31.40	7384	Rockland	1.51	7.10	55.03	6421
Lynnfield	4.48	5.37	44.55	6776	Rockport	3.40	2.43	56.85	4636
Malden	2.95	2.61	13.53	3252	Salem	5.25	12.28	22.25	6016
Manchester	3.37	1.72	59.39	4984	Saugus	1.59	5.58	40.24	7320
Marblehead	5.33	3.27	17.29	2903	Scituate	3.75	2.23	41.88	11281
Marlborough	1.54	5.10	52.48	14390	Sharon	1.92	4.61	66.49	15432
Marshfield	1.92	3.16	50.85	18678	Sherborn	0.14	5.82	67.63	10084
Maynard	2.03	7.95	48.73	3396	Somerville	3.60	0.83	0.26	2636
Medfield	0.54	5.14	60.49	9479	Southborough	1.79	3.44	55.76	9844
Medford	3.55	4.33	26.29	5648	Stoneham	4.75	3.30	38.48	4332
Medway	0.55	9.11	54.76	7372	Stoughton	1.09	3.12	54.07	10492
Melrose	5.03	0.92	25.98	3036	Stow	2.27	5.40	64.11	11672
Middleton	1.65	4.85	65.70	9332	Sudbury	1.44	5.35	52.14	15676
Milford	0.87	5.31	59.44	9808	Swampscott	8.02	3.42	27.30	1956
Millis	2.04	6.18	54.30	7828	Topsfield	2.12	3.89	54.45	8188
Milton	2.76	3.08	45.26	8495	Wakefield	2.36	2.89	28.22	5112
Nahant	21.84	2.84	13.43	737	Walpole	1.12	6.81	56.75	13330
Natick	2.49	4.51	39.69	9992	Waltham	1.52	2.98	27.36	8812
Needham	1.51	2.42	34.95	8194	Watertown	5.87	1.03	3.39	2708
Newton	7.24	1.03	12.98	11252	Wayland	2.31	3.25	42.46	10168
Norfolk	0.33	6.92	67.47	10159	Wellesley	3.87	1.26	22.91	6580
No. Reading	3.01	5.64	58.28	8680	Wenham	1.74	2.33	57.33	5321
Norwell	0.10	2.45	69.60	13133	Weston	3.12	4.44	51.80	10948
Norwood	2.70	5.67	31.78	6610	Westwood	2.19	5.02	52.05	7118
Peabody	2.28	7.33	33.08	10768	Weymouth	1.40	2.68	36.59	11528
Pembroke	1.19	2.99	60.13	15284	Wilmington	1.16	6.29	46.73	11076
Quincy	2.30	5.25	33.35	10752	Winchester	3.39	2.21	30.36	4060
Randolph	0.68	5.43	37.66	6569	Winthrop	11.70	3.66	—	1256
Reading	2.98	2.31	47.47	6388	Woburn	1.11	9.22	28.83	8275
Revere	7.44	6.70	4.46	4054	Wrentham	0.37	7.71	64.11	14447

1. Open Space—Recreation—those areas that are used for active recreation purposes such as ball fields, playing courts etc.

2. Open Transitional—open areas that are not necessarily used for open space or recreation purposes i.e. dumps, vacant lots etc.

3. Forest—open areas that are covered by natural vegetation. This category includes active and passive recreation areas and private undeveloped lands.

NOTE: Hopkinton—Total Acreage 28.1 sq. miles. Open Space 1497.54 (9% of Total)

SOURCE: Study Element Number 305 of the Southeastern New England Study, 1973

Appendix F

Percentage of Wetland Acreage by Municipality

Municipality	% Inland Wetland	% Coastal Wetland	Total Acreage	Municipality	% Inland Wetland	% Coastal Wetland	Total Acreage
Acton	3.73	—	12916	Carlisle	2.81	—	9884
Arlington	0.74	—	3484	Chelsea	—	—	1604
Ashland	.82	—	8240	Cohasset	1.12	1.69	6412
Bedford	7.13	—	8940	Concord	6.47	—	16536
Bellingham	3.96	—	11949	Danvers	3.95	0.65	8738
Belmont	1.57	—	2920	Dedham	6.89	—	6958
Beverly	1.39	0.42	9926	Dover	1.74	—	9970
Bolton	1.63	—	12773	Duxbury	4.18	6.38	15454
Boston	0.79	1.09	31244	Essex	4.70	19.99	9336
Boxborough	3.08	—	6680	Everett	0.17	0.63	2344
Braintree	2.61	0.16	9100	Foxborough	1.13	—	13032
Brookline	—	—	4359	Framingham	1.25	—	16848
Burlington	1.67	—	7528	Franklin	2.90	—	17227
Cambridge	0.98	—	4693	Gloucester	1.25	5.17	16973
Canton	5.08	—	12460	Hamilton	3.85	0.44	9574

(continued)

Appendix F (continued)

Percentage of Wetland by Municipality

Municipality	%Inland Wetland	%Coastal Wetland	Total Acreage	Municipality	%Inland Wetland	%Coastal Wetland	Total Acreage
Hanover	3.10	—	9978	Pembroke	3.81	—	15284
Hingham	1.75	1.07	14501	Quincy	0.61	4.47	10752
Holbrook	0.77	—	4769	Randolph	2.37	—	6569
Holliston	1.35	—	21176	Reading	2.36	—	6388
Hudson	4.47	—	7680	Revere	0.76	12.48	4054
Hull	0.23	4.25	1738	Rockland	2.60	—	6421
Ipswich	2.60	17.26	23204	Rockport	2.20	1.05	4636
Lexington	7.15	—	10972	Salem	2.84	0.66	6016
Lincoln	2.76	—	9544	Saugus	1.72	9.35	7320
Littleton	3.33	—	11345	Scituate	1.20	10.85	11281
Lynn	0.88	0.46	7384	Sharon	1.39	—	15432
Lynnfield	6.56	—	6776	Sherborn	3.60	—	10084
Malden	—	—	3252	Somerville	—	—	2636
Manchester	1.78	0.92	4984	Southborough	3.02	—	9844
Marblehead	1.30	0.37	2903	Stoneham	1.26	—	4332
Marlborough	1.34	—	14390	Stoughton	2.12	—	10492
Marshfield	3.88	10.58	18678	Stow	3.19	—	11672
Maynard	3.29	—	3396	Sudbury	7.48	—	15676
Medfield	7.37	—	9479	Swampscott	1.73	—	1956
Medford	0.33	—	5648	Topsfield	9.24	—	8188
Medway	1.15	—	7372	Wakefield	3.32	—	5112
Melrose	0.23	—	3036	Walpole	1.81	—	13330
Middleton	4.89	—	9332	Waltham	2.71	—	8812
Milford	4.20	—	9808	Watertown	0.14	—	2708
Millis	6.50	—	7828	Wayland	11.34	—	10168
Milton	0.69	1.94	8495	Wellesley	1.41	—	6580
Nahant	1.62	—	737	Wenham	3.79	—	5321
Natick	1.84	—	9992	Weston	2.84	—	10948
Needham	4.25	—	8194	Westwood	1.27	—	7118
Newton	1.10	—	11252	Weymouth	1.14	1.44	11528
Norfolk	3.06	—	10159	Wilmington	3.58	—	11076
No. Reading	4.91	—	8680	Winchester	0.91	—	4060
Norwell	3.47	1.06	13133	Winthrop	0.31	2.78	1256
Norwood	4.68	—	6610	Woburn	3.64	—	8275
Peabody	3.20	0.06	10768	Wrentham	2.22	—	14447

SOURCE: Study Element Number 3.05 of the Southeastern New England Study, 1973.

Note—vegetation associations are the determining factors for the percentage of wetlands indicated for each town.

If floodplain information is used, the % of wetlands in each town will increase.

NOTE: Hopkinton 1.8 sq. miles of water 1515 acres inland wetlands.

Appendix G

Percentage of Agricultural Acreage by Municipality

Municipality	% Agricultural Cropland	% Agricultural Pastureland	Total Acreage	Municipality	% Agricultural Cropland	% Agricultural Pastureland	Total Acreage
Acton	4.80	1.78	12916	Cambridge	0.23	—	4693
Arlington	0.22	—	3484	Canton	2.49	2.88	12460
Ashland	3.64	1.52	8240	Carlisle	5.08	2.91	9884
Bedford	3.95	1.19	8940	Chelsea	—	—	1604
Bellingham	1.10	5.90	11949	Cohasset	0.38	0.34	6412
Belmont	0.13	1.19	2920	Concord	10.38	4.26	16536
Beverly	2.06	2.69	9926	Danvers	8.41	2.04	8738
Bolton	9.94	5.23	12773	Dedham	0.64	—	6958
Boston	0.20	0.25	31244	Dover	3.85	1.92	9970
Boxborough	3.95	6.09	6680	Duxbury	3.50	1.84	15454
Braintree	0.32	0.31	9100	Essex	1.87	5.03	9336
Brookline	1.16	—	4359	Everett	—	—	2344
Burlington	2.32	—	7528	Foxborough	2.55	0.74	13032

(continued)

Appendix G (continued)**Percentage of Agricultural Acreage by Municipality**

Municipality	%Agricultural Cropland	%Agricultural Pastureland	Total Acreage	Municipality	%Agricultural Cropland	%Agricultural Pastureland	Total Acreage
Framingham	4.01	1.97	16848	Norwood	1.66	0.10	6610
Franklin	4.35	4.43	17227	Peabody	2.89	1.12	10768
Gloucester	0.04	0.22	16973	Pembroke	3.33	1.05	15284
Hamilton	3.25	8.72	9574	Quincy	—	—	10752
Hanover	2.37	1.06	9978	Randolph	0.50	0.50	6569
Hingham	2.84	0.39	14501	Reading	0.90	0.06	6388
Holbrook	0.31	1.55	4769	Revere	0.37	—	4054
Holliston	1.84	1.39	21176	Rockland	0.34	0.56	6421
Hudson	5.96	1.87	7680	Rockport	0.51	2.26	4636
Hull	0.86	0.23	1738	Salem	0.34	0.41	6016
Ipswich	3.56	6.44	23204	Saugus	0.95	—	7320
Lexington	2.38	1.95	10972	Scituate	1.51	0.64	11281
Lincoln	7.61	2.52	9544	Sharon	2.78	0.49	15432
Littleton	10.85	6.50	11345	Sherborn	1.99	9.25	10084
Lynn	—	—	7384	Somerville	—	—	2636
Lynnfield	1.04	0.48	6776	Southborough	6.22	4.45	9844
Malden	—	—	3252	Stoneham	1.70	—	4332
Manchester	0.08	—	4984	Stoughton	1.89	1.95	10492
Marblehead	0.65	—	2903	Stow	7.44	2.84	11672
Marlborough	4.76	3.21	14390	Sudbury	8.82	2.30	15676
Marshfield	1.18	2.10	18678	Swampscott	0.76	—	1956
Maynard	.76	.85	3396	Topsfield	6.11	4.84	8188
Medfield	4.95	1.61	9479	Wakefield	0.88	—	5112
Medford	—	—	5648	Walpole	4.18	1.12	13330
Medway	7.16	6.47	7372	Waltham	2.41	0.69	8812
Melrose	—	—	3036	Watertown	1.44	—	2708
Middleton	3.73	3.98	9332	Wayland	5.75	4.32	10168
Milford	0.87	0.68	9808	Wellesley	0.48	0.44	6580
Millis	5.81	8.30	7828	Wenham	4.56	6.67	5321
Milton	1.84	0.45	8495	Weston	1.35	1.18	10948
Nahant	—	—	737	Westwood	2.75	0.42	7118
Natick	2.39	3.17	9992	Weymouth	0.15	0.69	11528
Needham	2.06	0.04	8194	Wilmington	0.64	0.06	11076
Newton	0.56	—	11252	Winchester	0.83	—	4060
Norfolk	6.09	2.10	10159	Winthrop	—	—	1256
No. Reading	1.61	0.41	8680	Woburn	3.66	0.66	8275
Norwell	1.49	1.22	13133	Wrentham	6.03	3.61	14447

SOURCE: Study Element Number 3.05 of the Southeastern New England Study, 1973.

NOTE: Hopkinton Total acres 16,896 (not including water); agricultural acreage 1,377.54 (8%).

Appendix H

The Massachusetts Bay Circuit

In 1956 the Legislature authorized and directed the creation of a system of privately and publicly owned open spaces including parks, forests, reservoirs, wildlife preserves, scenic historic sites, and other properties to surround metropolitan Boston at a distance of fifteen to twenty miles, and to be called the Bay Circuit.

BAY CIRCUIT PROPOSAL



Appendix I

Open Space Acquisitions 1969-1974

Department of Natural Resources

Town	Year	Acreage
Ipswich	1969	0.30
Framingham	1970	61.00
Framingham	1970	364.50
Wenham	1970	0.77
Wenham	1970	1.50
Sharon-Easton	1971	1301.00
Hull-Boston	1973	23.00
Hull	1973	17.20
Hull	1973	.85
Ipswich	1973	44.60
Hanover	1973	2.70
Weymouth	1973	12.50
Hull	1973	23.10
Boston	1973	16.20
Hanover	1973	.60
Weymouth	1973	50.00
Boston	1973	2.00
Boston	1973	4.00
Boston	1973	17.50
Boston	1973	1.82
Quincy	1973	.25
Quincy	1973	3.00
Natick	1973	6.62
Carlisle	1974	818.00
Ipswich	1974	.40
Natick	1974	22.00
Lincoln	1974	.30

Total

2,795.11

SOURCE: Department of Natural Resources acquisition file.
1969-1974.

NOTE: Massachusetts Department of Natural Resources became
the Department of Environmental Management (DEM) July
1, 1975.

Appendix J

Open Space Acquisitions 1969-1974

Metropolitan District Commission

Property	Size
Charles River Res.:	
Duprey—Village Falls (Needham)	4.5 acres
YMCA—Red Wing Bay (Needham)	38.193 sq. ft.
Derenzo (Watertown)	48,345 sq. ft.
Gilligan (Newton)	4.2 acres
Mother Brook:	
Hicks	17.5 acres
Hicks	30,000 sq. ft.
Moses	1 acre
Coury	9,594 sq. ft.
DeFilipo (Dedham)	6,480 sq. ft.
Hicks	22,832 sq. ft.
DiAlessandro	37,200 sq. ft.
Wheeler and Motive Parts	36,288 sq. ft.
Stonybrook:	
Feegas	14,580 sq. ft.
Community Planning & Development (3 parcels)	199,968 sq. ft.
Other:	
North End Park (2 parcels)—transfer	129,102 sq. ft.
Peddocks Island (E. Coast R.) (Hull)	133,78 sq. ft.
Camp Hihan (No. Bay Boy Scouts) (Saugus)	47 acres
Kennedy Farms (Dedham—Cutler Park)	.65 acres
Seabrooke (Wellesley/Natick)	109,000 sq. ft.
Factory Hill Playground—transfer	5.5 acres
Stodder's Neck—Daley Cronin Landscape (Hingham)	22 acres
Hallet St. Dump—Verrochi	34.10 acres
Hallet St. Dump—transfer	458,600 sq. ft.
Kolligan Realty Trust (Medford)	56,251 sq. ft.
Dellaporta (Lynn)	19,011 sq. ft.
Ford Leasing Dev. (Medford)	6,233 sq. ft.
Neponset Realty	.3 acres
Redstone Realty	1.3 acres

SOURCE: Metropolitan District Commission acquisition file.
1969-1974.

Appendix K

General Determination of Project Significance and Inclusion in Report.

A. Ecologically Critical

Through the use of the Council's landscape analysis and natural areas survey studies of the United States Geologic Survey, the Soil Conservation Service, the State's Department of Environmental Management and local agencies, the Council has attempted to determine those areas in the region that because of their ecological character would be irreversibly damaged by any form of development, i.e. wetlands, unique topographical features, rare vegetation or soil groupings etc.

These areas were included as part of the regional open space plan irrespective of whether they had regional or local significance.

B. Projects with Regional Significance

Projects recommended by regional and state agencies that had a total acreage of over 250 acres were generally included in the report. In all instances the proposals were reviewed for ease of access. Also the areas considered had topographic and other natural features that allowed for a variety of open space and recreation uses.

C. Locally Controlled Projects with Regional Significance

All locally controlled and small projects in terms of total acreage were included in the report if, One: they are essential to the linking of other open areas, particularly open areas of regional significance; and Two: if they were part of a larger regional open spaces proposal such as acquisitions along a pond or a river bank; and Three: if the proposal was over 250 acres and because of its accessibility and proposed use it would attract people from surrounding communities.

D. Projects Near or Overlapping Local Boundaries

Many projects abutted or overlapped town boundaries. While each community is responsible for only that part of the area within its corporate boundary the MAPC offered suggestions on how towns with abutting projects could cooperate for mutual benefits. In most instances these projects also had to have regional significance beyond the two towns in which they were located.

Preservation and reuse of natural and scenic open spaces within the city is imperative.

Two thousand acres of natural land were identified and surveyed for the Boston Urban Wilds Study. The initial identification of the 143 sites was made through discussions with each Boston Redevelopment Authority district planner and the Boston Conservation Commission, city base map analyses, and field investigations of undeveloped land throughout the city. The basic criterion on which identification was based was the natural appearance of the site. For this study a natural area is defined as any area of land containing elements such as hills, rock outcroppings, woodland, ponds, brooks, wetlands, and/or beach, which appear to be natural; that is, they present an image of nature unaltered by human activity.

A survey was made of each identified site in which the natural and manmade elements of the area as well as character of the surrounding neighborhood were recorded. This information was then used to prepare an analysis of each site from which a numerical score is formulated. These scores reflect the importance of the site's natural features and provide a basis for comparison for the 143 sites.

The city has over 4,000 acres of public parks, playgrounds and reservations. An open space plan has been developed which would increase the present urban park system by 50 percent. The major components of the plan include the establishment of a system of five open space corridors in neighborhoods throughout the city. Each corridor would link existing open spaces with proposed conservation areas by establishing a system of urban wilderness trails and greenways along residential streets. Existing open spaces would be enlarged and parks established on all of the city's major hills and waterways.

The first phase of implementing the plan has begun by the transferring of 25 city-owned natural properties from the Real Property Department, (which normally auctions its land) to the Boston Conservation Commission which will manage them and other natural areas.

Appendix L

Boston Urban Wilds

Exploring undiscovered natural and scenic resources within the city is the primary objective of the Boston Urban Wilds Study. Sponsored by the National Endowment for the Arts, "City Options" Program and the Boston Redevelopment Authority, the Boston Urban Wilds Study takes the opportunity of the Bicentennial to look at the city with a new perspective of preserving its remaining natural areas. The study is designed both to inform Bostonians about natural and scenic recreational areas accessible to the public and to develop an open space plan for preserving unprotected natural resources. A major portion of the study was an investigation of natural and scenic open spaces that are privately owned and/or not dedicated to public use. These areas were studied as individual sites and as components of a citywide open space plan. The site analysis and open space plan can be used as a basis for decision-making regarding land acquisition, conservation easements and restriction and development opportunities.

The aesthetic, recreational, educational and psychological value of such areas greatly enhance the character of the city, keeping Boston an attractive place in which to live.

Bibliography

"Alternative Regional Sewerage Systems for the Boston Metropolitan Area". Boston: Camp, Dresser & McKee Consulting Engineers, 1972.

Berry, David. "Environmental Protection and Collective Action: The Case of Urban Open Space". RSRI Discussion Paper Series, No. 61. Philadelphia: Regional Science Research Institute, 1973.

"Boston Harbor Island Comprehensive Plan". Boston: Metropolitan Area Planning Council for Department of Natural Resources, 1972.

Caines, Charles., and Smart, C.M., Jr. "City Appearance and the Law". Fayetteville: University of Arkansas Press, 1971.

"Charles River Water Quality Study: Region 1". Boston: United States Environmental Protection Agency, 1971.

Cole, Bruce J., Ed. "Marine Recreation Conference: Planning for Shoreline and Water Uses." Kingston: University of Rhode Island, 1974.

"Completion and Summarization of the Massachusetts General Laws, Special Laws, Pertinent Court Decisions Relating to Water and Water Rights". Boston: Massachusetts Water Resources Commission, 1970.

Dawson, Alexandra D., Esq. "Environmental Law". Boston: Conservation Law Foundation of New England, 1975.

"Flood Hazard Area Management for New England". Boston: New England River Basins Commission, 1970.

Legislative Research Council. "Rights to Surface and Sub Surface Water in Massachusetts". Boston: The Causeway Print, 1957.

Lustgarten, David. and Yoring, Jane. "Conservation Planning: An Analysis for 18 Communities in Metropolitan Boston". Boston: Harvard Graduate School of Design, 1973.

"Man and Nature in the City". Washington: United States Department of Interior, 1968.

Mann, Roy. "Boston's Scenic Corridor — The Parkland of the Muddy River and Charles River Basin". Boston: Boston Redevelopment Authority, 1968.

"Massachusetts Outdoor Recreation Plan". Boston: Department of Natural Resources, 1971.

"National Outdoor Recreation Plan". Washington: United States Department of Interior, Bureau of Outdoor Recreation, 1973.

"Open Space and Recreation Program for Metropolitan Boston". Vols. 1, 2, 3. Boston: Metropolitan Area Planning Council, 1967-1969.

"Open Space and Recreation Program for Metropolitan Boston". Vol. 4 Open Space Law and 1972 Supplement. Boston: Metropolitan Area Planning Council, 1972.

"Outdoor Recreation: A Legacy for America". Washington: United States Department of the Interior, 1973.

"Protecting New England's Natural Heritage". Boston: New England Natural Resources Center, 1973.

Real Estate Research Corporation for CEQ, HUD, EPA. "The Costs of Sprawl". Washington: United States Government Printing Office, 1974.

"Recreation on Water Supply Reservoirs: A Handbook for Increased Use". Washington: Council on Environmental Quality, 1975.

"Residential Zoning in the MAPC Region". Planning Information Series. Boston: Metropolitan Area Planning Council, 1972.

NOTE: Master plans, recreation plans, and conservation programs were utilized, where available, for all towns.

Photograph Credits

- page 4
Soiling off Morblehead John W. Connery
- page 6
A walk ocross Boston Common MAPC Staff Photo
- page 8 - top
Aeriol of Lynn/Sougus Area Richard W. Beatty
- left
Conoeing the Ipswich River Susan S. Davis
- top right
Picnic Areo in Ashlond State Pork Barbara J. Bernard
- bottom right
Cambridge - Holyoke Center James Carras
- page 11 - top
Chorles River ot the Needhom/Dover line William Firth
- middle
Mystic River ot Medford Center MAPC Staff Photo
- bottom
Gravel pit along the Assabet River MAPC Staff Photo
- page 14
Mother Brook at Turtle Pond Parkwoy MAPC Staff Photo
- page 17 - top
Wolking trail ot World's End in Hingham
Barbara J. Bernard
- second
Ballfield on Boston Common James Carras
- third
War Memoriol Pork in Morshfield Barbara J. Bernard
- bottom
Government Center Plozo James Carras
- page 19 - top
A day of picnicking ond swimming at Nontosket Beoch
MAPC Staff Photo
- middle
Comping out in Wompatuck Stote Pork Barbara J. Bernard
- bottom
Launching romp on the Charles River ot Brighton
William Firth
- page 21 - top
Enjoying a day's outing in the Bock Bay Fens
Kenichi Nakano
- middle
Overlooking o solt morsh in Monchester Kenichi Nakano
- page 23
Feeding the ducks ot Glue Foctory Pond in Foxborough
Kenichi Nakano
- page 27 - bottom left
Singing Beoch in Monchester Kenichi Nakano
- top right
Holf Moon in Gloucester Kenichi Nakano
- middle right
A morsh in Essex Kenichi Nakano
- bottom right
A rood along Gloucester's coost MAPC Staff Photo
- page 29
Boston Light on Little Brewster Islond Robert Joseph
- page 32
The Navol Shipyard ot Chorlestown on the Chorles River
MAPC Staff Photo
- page 33 - top left
A view of Boston's waterfront William D. Giezentanner
- top right
Belle Isle Morsh in Winthrop Elissa M. Landre
- page 34 - bottom left
A doy of clom digging at Wollaston Beoch in Quincy
Barbara J. Bernard
- bottom right
A look at Hingham Horbor from World's End
Barbara J. Bernard
- page 35 - left
Enjoying o worm day ot Nantasket Beach
Barbara J. Bernard
- right
A view of Great Brewster Island Robert Joseph
- page 37
Cooling off at Revere Beach John W. Connery
- page 39
Aerial view of Nahont ond Lynn Horbor
MAPC Staff Photo
- page 40
White cops on the woves ot King's Beach in Lynn/
Swompscott oreo John W. Connery
- page 43
Town Beoch in Rockport MAPC Staff Photo
- page 44 - top
Essex, the Perkins Marino MAPC Staff Photo
- bottom
Plum Island in Ipswich/Newburyport oreo Kenichi Nakano
- page 47
Duxbury Beoch on o quiet doy MAPC Staff Photo
- page 48 - top
Cohasset's Little Horbor MAPC Staff Photo
- middle
Scituote's Third Cliff Barbara J. Bernard
- page 51 - top
Horn Pond in Woburn MAPC Staff Photo
- middle
Swimming ot Sondpit Pond in Acton MAPC Staff Photo
- page 53
A tronquil look at the Charles River in Boston
James Carras
- page 57 - top
Amelia Eorhart Dom on the Mystic River
MAPC Staff Photo
- middle
Boat basin ot Wellington Bridge on the Mystic River
James Carras
- page 59 - top
Chorles River Bosin ot the MDC boat house James Carras
- bottom
Chorles River ot Newton Upper Falls MAPC Staff Photo
- page 62 - top
Neponset River Reservotion ot Milton Barbara J. Bernard
- middle
Neponset River morsh at Quincy Kenichi Nakano
- page 63
Essex River Morsh New England River Basins Commission

Photograph Credits (continued)

- page 65
Overlooking Willet Pond in Norwood Kenichi Nakano
- page 67
3rd Herring Brook at Honover Barbara J. Bernard
- page 70
Picnic area in Brodley W. Polmer State Park
John W. Connery
- page 71
Bristol Block Reservation in Norfolk Barbara J. Bernard
- page 75
A quiet trail in the Middlesex Fells Reservation
John W. Connery
- page 76
Meandering trail in Breakheart Reservation
John W. Connery
- page 77
A log crossing in Solem Highlands Reservation
John W. Connery
- page 78
A scenic overlook in Brodley W. Polmer State Park
John W. Connery
- page 79 - top
Remains of Middlesex Canal's river crossing aqueduct
Boston Globe
- bottom
A segment of the Middlesex Canal today Robert Joseph
- page 83 - left
Tophet Swamp in Corliss MAPC Staff Photo
- right
Old North Bridge in Concord John W. Connery
- page 84
A look at Cambridge Reservoir John W. Connery
- page 86
Picnic area in Hopkinton State Park Barbara J. Bernard
- page 87
Sailing on Lake Cochituate Susan S. Davis
- page 88
Entrance to Hole Reservation Kenichi Nakano
- page 89
Borderland State Park in Foxborough
William D. Giezantner
- page 90 - top
A day in the sun at Houghton's Pond Barbara J. Bernard
- left
The ski tow at Blue Hills ski area MAPC Staff Photo
- right
Entrance to the Trailside Museum Barbara J. Bernard
- page 91 - left
Composite in Wompatuck State Park Barbara J. Bernard
- right
The North River at Cross Street in Honover
Barbara J. Bernard
- page 94
Cross country track area in Franklin Park Kenichi Nakano
- page 95
Feeding the pigeons on Boston Common MAPC Staff Photo
- page 97 -right
Swan boats in Boston's Public Garden MAPC Staff Photo
- bottom
Larz Anderson Park in Brookline James Carras
- page 101 - right top
Gronary on Boston Common James Carras
- right middle
Saugus Iron Works MAPC Staff Photo
- bottom
Old South Meetinghouse in Boston's downtown area
James Carras

Technical Advisory Committee on Open Space and Recreation

Nathan W. Bates, Chairman, Cohasset
 Charles E. Abrahamson, Jr., Milford
 Richard H. Anderson, Bedford
 George B. Bailey, Sharon
 Mrs. Eugenie Beal, Boston
 Joseph Beals, Marshfield
 Daniel Bumagin, Beverly
 Ronald B. Campbell, Jr., Sudbury
 M. Perry Chapman, Belmont
 Robert B. Chase, Watertown
 Evans Hawes, Department of Environmental Management
 Atherton Loring, Duxbury
 Joseph T. McGlone, Pembroke
 Francis G. Morrill, Norwood
 Finley Perry, Dover
 Julie O'Brien, MDC
 A. David Rodham, Lynnfield
 Edward C. Shinnick, Woburn
 David Stonefield, Wrentham

Executive Committee 1975-1976

John J. McCarthy, Chairman
 Neal Holland, Vice-Chairman
 Richard K. McMullan, Treas
 Mrs. Theodore C. McKie, Se
 George B. Bailey
 Mrs. Elizabeth Bransfield
 Daniel Bumagin
 John J. Carroll, Massachuset
 Designee: Thomas F. Hu
 Steven P. Cohen
 Mrs. Ann Connor
 Ms. Kathleen M. Doyle
 John E. Drew
 Robert L. Farrell, Boston Rec
 Designee: Robert T. Ker
 James A. Fay, Massachusetts
 Designee: Thomas P. Ca
 Ms. Marilyn Fraser
 Robert R. Kiley, Massachuse
 Designee: Donald M. G
 Mrs. Agnes E. Moore
 John Pepper
 Eugene K. Skoropowski
 Mayor Philip J. Spelman
 Lawrence Susskind
 Charles Turner
 William D. Weeks
 Bette Woody, Massachuset
 Management.
 Designee: Evans Hawes
 Rev. W. Seavey Joyce
 Harry A. Kelleher

Executive Committee 1976-1977

George B. Bailey, Chairman
 Rev. Thomas D. Corrigan, Vice-Chairman
 Kathleen M. Doyle, Secretary
 Eugene K. Skoropowski, Treasurer
 Mrs. Elizabeth Bransfield
 John Carroll, Massachusetts Department of Public Works
 Designee: Thomas F. Humphrey
 Ms. Luz Cuadrado
 Charles M. Evans

James A. Fay, Massachusetts Port Authority
 Designee: Ms. Catherine Donaher
 Ms. Marilyn Fraser
 Kevin R. Geaney
 Ralph E. Jordan
 Robert R. Kiley, Massachusetts Bay Transportation Authority
 Designee: Donald M. Graham
 Lars Norman Lundin
 John J. Marino, Massachusetts Department of Commerce
 & Development
 Designee: Joseph L. Flatley
 John J. McCarthy
 Ms. Marcia Molay
 George Morrison
 John B. Pepper
 Mayor Joel M. Pressman

D43 Metropolitan Area M7 Planning Council.

The 1976 regional open space plan.
 Vol. I. Open space & recreation program for Metro-
 program for Metropolitan Boston.
 Boston: July 1976.

Massachusetts Department of Environmental
 Management
 with special thanks to Evans Hawes and to
 Paul White
 Charles River Watershed Association
 Lake Cochituate Watershed Association
 Norumbega Association
 New England Power Company
 Jeanne M. Boudreau
 Sketches
 W. E. Andrews Company, Inc.
 Printing







**The 1976
Regional
Open Space Plan
Summary**

The Open Space and Recreation Program for Metropolitan Boston



INTRODUCTION

During the past six years, Metropolitan Boston's three million citizens have lost access to approximately 15,000 acres of land recommended for use as open space by the Metropolitan Area Planning Council. The Council's 1969 study of open space available to the public suggested a vigorous acquisition program which would meet the region's growing open space needs. Unfortunately, many of the areas suggested in 1969 now accommodate competing land uses—residential, commercial and industrial development—shutting out any possibility for open space land use.

The amount of available open space has not decreased in the original 79 community study area—and in fact has increased by 8,828 acres since 1969. But with the growing demand for open space and recreation areas by an expanding population, the region's gains pale when compared to the 15,000 acres of potential open space land that has been lost.

The three main reasons for the loss of land are inadequate available funding to purchase land, weak laws regulating the use of sensitive environmental areas and a lack of a strong commitment to the preservation of open space and recreation land at all levels of government.

The 1976 *Regional Open Space Plan*, an update of the MAPC's 1969 *Open Space and Recreation Plan and Program for Metropolitan Boston*, once again attempts to correct the deficiency of available open space and recreation land. Under the direction of the Council's Technical Advisory Committee on Open Space and Recreation, the MAPC staff examined the progress of 1969 proposals, evaluated their effectiveness, and suggested an updated strategy taking into consideration various changes in the region.

To meet regional open space needs, the 1969 plan proposed an open space system of 190,000 acres which added 145,000 acres to the 45,000 acres of existing open space.

The 1976 plan calls for development of an open space system of approximately 215,000 acres, of which 68,000 acres are already in public ownership. Except for those areas that are now used for public purposes, the remaining 147,000 acres must be brought under some public control or ownership during the next 15 years in order to satisfy the growing need.

MAPC's 1976 *Regional Open Space Plan* stresses that existing open space must be protected, maintained and improved, and new





- **Protect** environmentally sensitive areas.
- **Provide** adequate open space acreage for passive and active recreational opportunities to accommodate the projected population increase.
- **Disperse** open space and recreation benefits more equally throughout the region.

The following summary highlights major findings and conclusions of the report. Recommendations for specific geographic areas can be found in the body of the report.

acreage added to the system where increased demand is anticipated. Further, open space must be considered a major element in urban design with a significant impact on the shape and form of development.

The 1969 MAPC plan was the starting point for the development of the 1976 plan. All previous proposals and assumptions were studied and their validity after five years was carefully evaluated. Information on land use such as topography, ecologically sensitive areas, transportation improvements and population increases was gathered and studied, and an intensive public participation program was carried out. In addition, the study area was expanded to include the 101 cities and towns that presently make up the MAPC region.

The result of this effort is a current, up-to-date regional open space plan for the Boston Metropolitan Region. It is concerned with four major categories: the coast, fresh water resources, reservations and urban open space. In these areas the plan attempts to:

- **Preserve** significant natural areas.

REGIONAL POLICY



General policy statements form the basis for the specific recommendations and programs contained in this plan. They are designed to be used by local, regional, state and private agencies as a framework to make open space and recreation decisions.

Administration of Open Space Areas

1. The implementation of a regional open space and recreation plan is the responsibility of existing federal, state, regional and local agencies such as the U.S. Department of Interior, Executive Office of Environmental Affairs, Metropolitan District Commission and local conservation commissions.
2. Private, nonprofit charitable organizations and associations concerned with open space and recreation should be encouraged to participate in all decisions regarding the implementation of the regional open space and recreation plan.
3. The open space and recreation plans and policies of all local, regional and private charitable agencies should be coordinated by a single clearinghouse so that priorities can be established.
4. Educational programs that inform people about the natural history of the region as well as recreational opportunities available to them should be encouraged.
5. Existing laws that prohibit the diversion of public open space for any use, unless it is a public necessity, must be supported.
6. Where there is a scarcity of public open space, more intensive use of existing areas should be considered. This may involve night use through lighting and more on-site supervision.

7. Regional open space and recreation areas should be more accessible by various forms of mass transportation as well as bicycles.
8. Areas intended to provide open space and recreation for regional use should be assigned top priority by all public and private agencies concerned with the protection, control and/or purchase of open space.

Quantity of Open Space Areas

1. Fee simple acquisition and conservation restrictions should be basic methods used to carry out open space proposals.
2. Both inland and coastal wetlands should be publicly regulated through restrictive orders or zoning and where necessary, acquired either in fee or controlled under a conservation restriction.
3. Areas such as power line rights-of-way, large commercial and public parking lots, ski slopes, watershed lands and water supply areas should be considered for recreation use.
4. The multiple use of all existing public open spaces related to water supply areas should be encouraged where possible.
5. Because of population density and the accompanying lack of open space, the special needs of densely settled urban areas should be emphasized.
6. Existing private open space which can be classified as recreationally or ecologically critical should be included as part of the regional open space plan.
7. Activities such as gardening should be encouraged by all local and regional groups.

Quality of Open Space Areas

1. All communities should amend their zoning by-laws to permit planned unit development (PUD).
2. Historic buildings and locations throughout the region should be protected and integrated with the regional open space plan.
3. Urban design techniques such as sign laws, architectural review boards, off-street parking and restrictions on outdoor advertising should be used to preserve the urban physical environment.
4. A program to reduce pollution in inland and coastal waters must be developed.
5. Strong and effective maintenance programs for open space and recreation land should be developed at the local, state and regional levels.

THE COAST



The coastline is one of the greatest natural resources in the MAPC region. Because of its economic and recreational value, many homes and businesses have been built near the coast. In some instances, this has caused environmental damage. Worse, it has caused the coastline to become inaccessible for public use.

Only about one-sixth of the MAPC region's approximately 600 miles of tidal shoreline is available to the public. Since swimming and other related sports are the recreation activities

most in demand, the few public areas that do exist are heavily used. In accommodating future demands, the coast may be overused to a point where irreversible environmental damage may occur. More coastal open space and recreational land is needed to protect this valuable resource.



3. A coastal zone management program should be adopted to protect fragile coastal areas. In conjunction, all existing laws relating to the natural resources of the coast should be strictly enforced.
4. Alternative modes of access to public areas along the coast should be encouraged.
5. To prevent misuse of developed portions of the coast, waterfront districts should be established as part of local zoning and subdivision ordinances.
6. Areas of historic significance along the coast should be protected.

Policies for Coastal Resources

1. The coastline should be used for open space, recreation, research and aesthetic purposes only. Exceptions to this would be areas that are essential for commercial and industrial activity and where residential development will not damage environmentally sensitive areas.
2. A free right of passage to coastal areas between mean high and low water should be secured for public use. Areas that are ecologically sensitive, such as salt marshes, should be exempt from this policy.

FRESH WATER RESOURCES

In the MAPC area there are 52 established Great Ponds, 9 important rivers and approximately 100,000 acres of wetland and swamp.

The primary use of fresh water resources is public water supplies; however, recreation, wildlife habitats, industry, and agriculture are also dependent upon fresh water. Because of its varied uses, the demand is steadily increasing.

Without compromising drinking water quality, fresh water resources could alleviate the present shortage in water-oriented recreation, ease the burden on coastal areas and reduce the need to travel significant distances to water-oriented recreation spaces.

Policies for Fresh Water Resources

1. Pollution problems must be eliminated since many of the most polluted rivers and ponds are those directly adjacent to the greatest number of potential recreation users.
2. The ponds and reservoirs used for public water supply also serve as major open space assets for the metropolitan area. But

these areas should be available for "use" only in ways which will not jeopardize the quality of drinking water.

3. Watershed or water supply land should not be altered or disposed of in any way



that would preclude future open space and recreation use. Recreation agencies should have first option on reuse of this land.

4. Private watershed associations should be established and encouraged with the assistance of public agencies.
5. The whole watershed is the natural and logical unit for management of water resources. Water removed and returned to a river or stream should be monitored and controlled by one organization or a cooperative group of municipalities.
6. All dump and sanitary landfills presently abutting riverfront and wetland areas should be closed as soon as alternative sites can be found. No new developments of this nature should be allowed on soils associated with a river's 100-year floodplain.

RESERVATIONS



Reservations are large areas set aside for conservation and recreation purposes. They also serve to preserve areas with distinctive topography or special ecological features, provide large breaks in the urban development

pattern and offer a wide range of recreation opportunities.

The rapid spread of housing, commerce and industry throughout the metropolitan area has turned fringe areas into established subur-

ban development. New reservations are needed to provide breaks in the existing development pattern and to give form and guidance to urban development. New reservations will also provide needed open space and recreation opportunities and protect ecologically unique and sensitive areas within the region.

Since 1969, there has been some progress in acquiring new reservations, but there is still a need for an active acquisition and restriction program for the protection of large open space and recreation areas.



Policies for Reservations

1. Areas considered for reservations, except in heavily urbanized locations should be large enough to completely insulate the users from the sights, scenes and sounds of development, and guarantee a predominantly natural character within their bounds.
2. Acquisition should be the primary method of preserving land to insure creation of an adequate reservation system.
3. The reservation system should incorporate examples of distinctive natural features of topography and vegetative cover.
4. When possible, reservations should be acquired to provide a variety of recreation experiences.
5. Areas should be able to withstand use without significantly altering its natural character.
6. Reservations should be developed to accommodate varying intensities of use.
7. Access to reservations should be limited to controlled points from the major road system. Public transportation should be encouraged.
8. Before a new reservation is opened, a careful study of its impact on surrounding areas should be made. Action necessary to alleviate local problems such as parking should be completed before the reservation is opened for public use.



The communities of Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, Somerville and Watertown make up the core cities of the region. These communities have particular open space and recreation problems not found in suburban and rural areas; specifically, lack of open space, traffic volume, pollution problems, and specialized recreation needs.

Policies for Urban Areas

1. Urban open space should be designed to sustain year-round use where appropriate.
2. The local park and recreation departments should publicize the availability of existing open space in urban areas and their uses.
3. Programs and activities should be designed to provide both active and passive forms of recreation.
4. Urban open space and recreation areas should be accessible by foot, bicycle and public transportation.
5. Barriers to movement and vision should be removed.
6. Design of an open space and recreation system should complement the area.
7. Highest priority for capital expenditures should be allocated to neighborhoods with high density and low income.
8. Existing open space and recreation areas should not be diverted to non-open space use, and should be carefully maintained.
9. Urban communities should involve their residents in efforts to improve open space and recreation areas.
10. Large institutional holdings, especially in urban communities, should be considered for open space when a change in existing use would result in non-institutional character.

HISTORIC AREAS

Preservation of historic sites and districts adds an educational and cultural dimension to the experience of city life.

In general, open space, educational and historic land uses are compatible.

When historic sites are adjacent to open space or educational uses, care should be exercised to assure that their character is not altered in favor of accommodating large numbers of people.

The plan refers to "significant" historic areas as those listed in the National Register of Historic Places as well as all those listed by state and local historical commissions.



Policies for Historic Areas

1. Local governments should be encouraged to create historical commissions.
2. An accurate survey of all historic sites should be a priority goal for all historical commissions.
3. The definition of historic areas should be broad enough to include any area, facility or building that represents a particular part of our heritage.
4. Significant acreage should be included with any historic site or district to protect both the character and setting of the area in question.

IN CONCLUSION

The report presents criteria for proposed and existing implementation techniques and the extensive appendix material provides valuable statistical information about the region.

Photograph Credits

Cover photograph

Bicycling through the Riverway in Brookline Ken-ichi Nakano

page 1

Mother Brook at Turtle Pond Parkway Staff photo

page 2 - middle

Mystic River at Medford Square Staff photo

- bottom

Charles River at Needham/Daver line William Firth

page 3

Gravel pit along the Assabet River Susan S. Davis

page 4

Sailing off Marblehead John W. Connery

page 8 - top

King's Beach, Lynn/Swampscott John W. Connery

- middle

Belle Isle Marsh, Winthrop Elissa M. Landre

page 9

Feeding the ducks at Glue Factory Pond, Foxborough Kenichi Nakano

page 11

A picnic area at Bradley W. Palmer State Park John W. Connery

page 13

Feeding pigeons in Boston's historic Common Staff photo

page 14

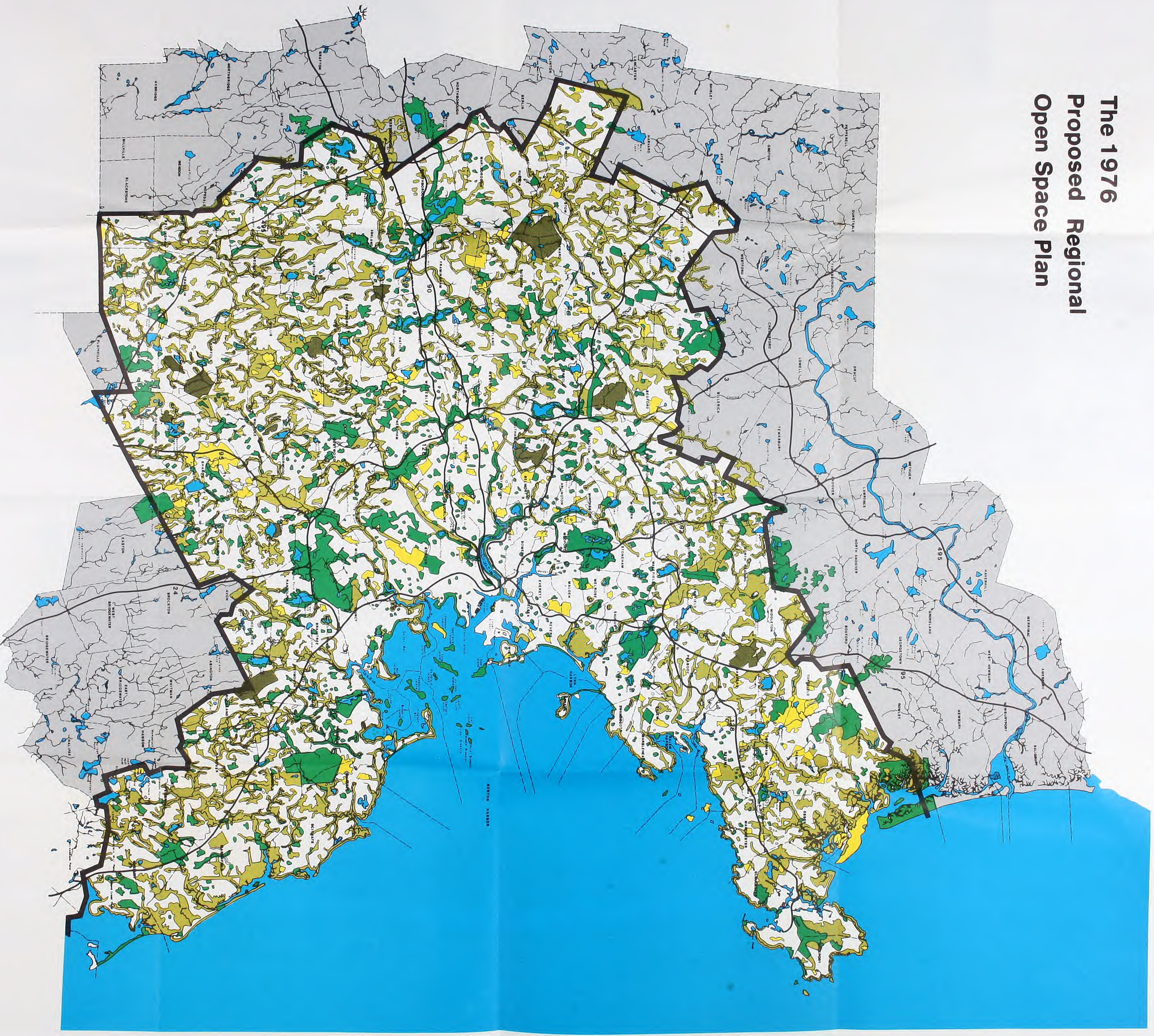
A view of Boston's historic Old South Meetinghouse James Carras

Credits

The 1976 Regional Open Space Plan Summary

Richard M. Doherty, Executive Director
James A. Miller, Deputy Executive Director
John W. Connery, Project Director
Karin Barter, Summary Editor
Barbara J. Bernard, Design & Layout
Mary D. Profit, Paste-up
Jeanne M. Baudreau, Sketches
W.E. Andrews Company, Inc., Printing

The 1976 Proposed Regional Open Space Plan



EXISTING COMPONENTS

- Publicly-held areas
- Privately-held areas, generally available to public
- Non MAPC communities
- Water bodies

PROPOSED ADDITIONS

- Publicly-held areas, not generally used for open space/recreation
- Privately-held areas to be added



Drawn by: Karen E. Crystal
Source: Base map-USGS quads
Open space information
Community plans
State agencies
MAPC proposals

The preparation of this map and summary was financially aided by the Office and Bureau of the Metropolitan Area Planning Council, Inc. The U.S. Department of Transportation, Bureau of Urban Development, The Federal Highway Administration.

July 1976

